2017 China Collegiate Computing Contest
Mobile Application Innovation Contest
After the success of the First China Collegiate Computing Contest – Mobile Application Innovation Contest in 2016, the 2017 Contest was launched in March. The Contest, including the first, the second and the final rounds, lasted 7 months and concluded successfully at Zhejiang University on September 24, 2017, drawing wide attention for its innovations and bright spots.

I. Numerous Bright Spots

This year over 5,000 students registered for and participated in the Contest and the entries cover a broad range including health care, senior care, education, environmental protection, flood control and disaster relief, industry, agriculture, safety, big data, administration, etc. In comparison with last year (when 361 teams from 161 universities participated in the Contest with 360 entries), this year’s Contest saw an increased number of entries with higher quality and more technological innovations, as well as more events and greater social influence. The Contest efficiently embodied its objectives – to promote reform in teaching contents and teaching methods for collegiate computer courses; to bring out students’ innovation; to improve students’ computer skills for analyzing and solving problems, especially the skills to design and develop mobile applications, to foster the spirit of teamwork and to raise the teaching standards for collegiate courses related with mobile application development. Numerous bright spots of the Contest are worth noting:

- **An increased number of participants**: More than 5,000 students from over 200 universities participated with 463 entries.
- **Participation from broader areas**: The Contest had participants not only from mainland China but also from Hong Kong China, Taiwan and Singapore.
- **More honors and praises**: The Contest was thought highly of by the Ministry of Education (MOE) and the Teaching Steering Committee of MOE, and was praised by the presidents of Zhejiang University and Feng Chia University.
More teamwork: This was the first time that the Contest held six educational events at the same time, involving over 20 colleagues from various departments of Apple, including Governmental Affairs, R&D department, HR department, Sales department, Marketing department and WWDR; this was also the first time that the Contest was co-hosted by the Teaching Steering Committee of MOE, Higher Education Press and Zhejiang University.

Outstanding design entries: The entry “Step Beats”, which ranked first in the second round of this Contest, was recommend by the Division of Science and Technology, Higher Education Department, Ministry of Education, to China College Students “Internet Plus” Innovation and Entrepreneurship Competition (hosted by MOE and participated in by 1.5 million university students in 370,000 teams from 2,241 colleges and universities) and won the Gold Prize. This shows the high quality of the Mobile Application Innovation Contest.

Stronger PR support: For the first time the Contest arranged interviews for the media and the coverage was positive and lively. The management of Apple (China) gave the Contest a thumb-up on weibo.

Enthusiastic feedback from universities: Several universities gave enthusiastic feedback on the Contest and participated in it actively to improve teaching through the contest, and to promote the training of talented people and the development of ecological circles.

Greater influence: The Contest started a nationwide trend in mobile App design, and has promoted entrepreneurship in innovative technologies and provided university students platforms for self-expression, competition, and financing.
II. Various Events

Besides the heated first, second and final rounds, the Contest also held various events, so that teachers and students would have the chance to learn about Apple’s innovative ideas and edge-cutting technologies, which will help university students realize their entrepreneurial dreams.

- **Student Salons:** The Students’ Salon of the Mobile Application Innovation Contest successively visited universities in 11 cities, including Hangzhou, Hefei, Lanzhou, Shanghai, Xi’an, Changchun, Nanjing, Chengdu, Guangzhou, Wuhan and Jinan, and gave its touring on-campus lectures ‘2017 iOS Club’. Besides providing technology lectures and instructions to teachers and students, interacting and communicating with the students, the Salon also hosted various activities such as regional academic forums. Over 1,000 teachers and students from 45 universities participated in the activities.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Host University</th>
<th>No. of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 18</td>
<td>Hangzhou</td>
<td>Zhejiang University</td>
<td>131</td>
</tr>
<tr>
<td>April 23</td>
<td>Hefei</td>
<td>University of Science and Technology of China</td>
<td>25</td>
</tr>
<tr>
<td>May 9</td>
<td>Changchun</td>
<td>Jilin University</td>
<td>51</td>
</tr>
<tr>
<td>May 7</td>
<td>Lanzhou</td>
<td>Lanzhou University</td>
<td>63</td>
</tr>
<tr>
<td>May 16</td>
<td>Guangzhou</td>
<td>Guangdong University of Foreign Studies</td>
<td>27</td>
</tr>
<tr>
<td>April 27</td>
<td>Xi’an</td>
<td>Xi’an Jiaotong University</td>
<td>65</td>
</tr>
<tr>
<td>May 15</td>
<td>Wuhan</td>
<td>Wuhan University</td>
<td>104</td>
</tr>
<tr>
<td>May 17</td>
<td>Nanjing</td>
<td>Nanjing University</td>
<td>96</td>
</tr>
<tr>
<td>April 26</td>
<td>Shanghai</td>
<td>Shanghai Jiaotong University</td>
<td>91</td>
</tr>
<tr>
<td>May 14</td>
<td>Chengdu</td>
<td>Chengdu University of Information Technology</td>
<td>109</td>
</tr>
<tr>
<td>May 18</td>
<td>Jinan</td>
<td>Shandong University Qilu Software College</td>
<td>97</td>
</tr>
</tbody>
</table>

- **Final-round Camp:** During the summer vacation, 80 competitors who entered the final round joined the Final-round Camp to further improve their teamwork and their skills for application development.

- **Coach Meeting and Training:** Over 40 teachers joined in the Coach Meeting and Training. Engineers from Apple shared and communicated with the teachers on system safety, iOS App development, integral hardware-software development, etc.

- **Experiencing Taiwan:** When the Mobile Application Innovation Contest was held in Taiwan, experts on the Organizing Committee gave the Contest their support. They closely inspected the Contest in Taiwan before selecting the top five out of the 174 entries from 38 universities to enter the final to be held at Zhejiang University.
Apple Store Tours: During the final, the Organizing Committee and Apple co-hosted two Apple Store Tours. The participants visited the Apple Store at MixC Hangzhou and tried the latest Apple products, including iPhone 8. Sam, an employee from Apple demonstrated how to use iPhone with VoiceOver, and helped students understand barrier-free programming and experience the powerful technology that has brought great convenience to people’s life.

Apple HR Talks: At the venue of the final, the Apple HR Talks was held. Apple HR managers explained about Apple’s recruiting plan and shared ideas about professional experience building and profession planning. Zhang Haining, Director, Wireless Technology at Apple, talked about the culture of Apple’s technology teams and shared his experience and understanding of research and development. Jolly Wang, Senior Government Affairs manager at Apple, interacted with Zhang Lekai and Zhang Fuxu, winners respectively of the Grand Prize and the First Prize in the First Contest, who talked about how they worked aggressively and how they kept perfecting their entries during the Contest. They also talked about their engagement in public welfare and social service along with their efforts to realize their entrepreneurial dreams in the industry of innovative technology.
Innovative Mode of Reviewing: Judges of the Contest were divided into Panels A and B, and reviewed the 27 teams. The 9 teams that entered the final round were reviewed openly, and broadcast live on the Internet, which greatly increased the fairness and transparency of the Contest, and improved the participating university students’ communicative skills and the spirit of teamwork.

All-round Broadcasting: The Contest disseminated its progress and announced its various events through its website, WeChat official account and weibo account, which not only helped teachers and students conveniently acquire information about the Contest, but also greatly increased the Contest’s influence. This was highly praised by the MOE and by the universities.

- The WeChat official account posted 57 messages and had over 2,500 followers.
- The weibo account posted 49 messages and had over 1,100 followers.
- The QQ group had over 330 members and was an important channel for the Contest’s everyday interactions.
- The Contest’s official website played an important role in making announcements for the Contest, especially those about registration, submission and reviewing.
III. Diverse Entries

The principle of the Contest is to “focus on the Contest’s recommended areas of application and hot and difficult issues of social concern.” The entries showed distinctive potential commercial value, as well as university students’ increasing concern for humanity and society. For example, not only did the Grand-Prize winning entry apply the latest iOS technology, but it was also an effort to carry forward the art of Peking Opera, an experiment that would contribute to helping more people understand and appreciate traditional Chinese art.

—— The 55 entries and teams that entered the final round ——

(In a random order)

<table>
<thead>
<tr>
<th>Project</th>
<th>School</th>
<th>Creators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Here Comes the Nanny 2.0 system</td>
<td>Shenyang Aerospace University</td>
<td>Chang Kerou, Zhang Jin, Zhang Yuhang</td>
</tr>
<tr>
<td>Tracing the Heart</td>
<td>Shijiazhuang Information Engineering Vocational College</td>
<td>Chang Song, Zhao Zhige, Li Boxiang</td>
</tr>
<tr>
<td>Joy App</td>
<td>Wuhan Textile University</td>
<td>Chen Shiyu, Yin Quan, Sun Hao</td>
</tr>
<tr>
<td>Sunny-side Up: a friendly bookkeeping App</td>
<td>Zhejiang University</td>
<td>Chen Songyin, Zhou Yiping, Sun Chihao</td>
</tr>
<tr>
<td>Pet World</td>
<td>Wuhan Polytechnic (WHPT)</td>
<td>Chen Xiaoli, Li Hui, Wang Mengcheng</td>
</tr>
<tr>
<td>Babe's Happy Shopping</td>
<td>Changsha Normal University</td>
<td>Cheng Yongpeng, Ai Na, Ji Yanzhen</td>
</tr>
<tr>
<td>One Picture</td>
<td>Guangzhou University</td>
<td>Deng Guoxiong, Wang Yifan, Liu Zijian</td>
</tr>
<tr>
<td>De-Chinese</td>
<td>Shanghai Business School</td>
<td>Fu Jachen, Bo Zijing</td>
</tr>
<tr>
<td>Flappy48</td>
<td>Nanjing University</td>
<td>Hao Chun, Dong Fan</td>
</tr>
<tr>
<td>Dream Maker</td>
<td>Zhejiang University</td>
<td>He Jing, Huang Jiaqi</td>
</tr>
<tr>
<td>Discovery ZJU</td>
<td>Zhejiang University</td>
<td>He Yu, Zhang Zhe, Xu Guorui</td>
</tr>
<tr>
<td>Faces of Peking Opera</td>
<td>Tongji University</td>
<td>Hu Beini, Liu Lidong, Wu Shuhan</td>
</tr>
<tr>
<td>Cloud-based Mobile Abstract Reading App</td>
<td>Shenzhen University</td>
<td>Huang Xiaojun</td>
</tr>
<tr>
<td>The E-Card</td>
<td>Changchun University of Technology</td>
<td>Huang Zishan, Ma Yunqi, Di Rongyu</td>
</tr>
<tr>
<td>Run4Fun</td>
<td>Sichuan University</td>
<td>Jiang Jiahao, Wang Xinrou, Huang Zhizhong</td>
</tr>
<tr>
<td>Step Beats</td>
<td>Zhejiang University</td>
<td>Li Chenxiao, Zeng Zhihua, Yu Zhenyun</td>
</tr>
<tr>
<td>DIY Art Workshop</td>
<td>Heilongjiang University</td>
<td>Li Dengyue, Cheng Xinyan, Yang Yuxi</td>
</tr>
<tr>
<td>Words of Sand</td>
<td>Zhejiang University</td>
<td>Li Sixuan, Fu Zheren</td>
</tr>
<tr>
<td>Food Culture</td>
<td>Changchun University of Technology</td>
<td>Liao Peizhi, Wang Yue, Fang Qianwen</td>
</tr>
<tr>
<td>The Heart Hears</td>
<td>Zhejiang University</td>
<td>Lin Yuuu, Li Tianke, Wu Meiling</td>
</tr>
<tr>
<td>Blessed are the Poor</td>
<td>Guangxi Normal University</td>
<td>Lin Yudan, Ye Xianxian</td>
</tr>
<tr>
<td>Recommending the Best—Review-based Smart Digital Product Recommendation</td>
<td>Nankai University</td>
<td>Liu Jing, Li Na, Ceng Yuyuan</td>
</tr>
<tr>
<td>I'm Calling the Police</td>
<td>Shanghai Business School</td>
<td>Long Yue, Xia Shenli, Li Shihuan</td>
</tr>
<tr>
<td>Innovation</td>
<td>Changsha Normal University</td>
<td>Luo Wei, Tian Tingting, Xiao Shifei</td>
</tr>
<tr>
<td>Project</td>
<td>School</td>
<td>Creators</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>FootMark</td>
<td>Central South University</td>
<td>Mai Yuxiang, Huo Yongzhen, Yin Aoxiong</td>
</tr>
<tr>
<td>Easy Parking: Fast Parking App</td>
<td>Shanghai Ocean University</td>
<td>Shi Yu, Guo Huanjie, Juguang Xiongfei</td>
</tr>
<tr>
<td>Old Buddies</td>
<td>Heilongjiang University</td>
<td>Su Bowen, Wang Haifeng, Liu Hewei</td>
</tr>
<tr>
<td>Grabbing the Parking Lot</td>
<td>Hebei University</td>
<td>Su Donghang, Wang Jianmeng, Pang Siqi</td>
</tr>
<tr>
<td>The Hamster’s Diner App</td>
<td>East China University of Political Science and Law</td>
<td>Tang Xin Yu, Zhang Mingzhuo, Tao Junyu</td>
</tr>
<tr>
<td>The Auspicious Hour</td>
<td>Jilin University</td>
<td>Wan Jiabing, Zhu Chao, Li Xiaomin</td>
</tr>
<tr>
<td>Campus Assistant</td>
<td>Hunan University of Technology</td>
<td>Wang Xiaochen, Li Hancong, Qiu Xiongqiang</td>
</tr>
<tr>
<td>Riding</td>
<td>Heilongjiang University</td>
<td>Wang Caixin, Li Xiao, Yu Chenglong</td>
</tr>
<tr>
<td>BluePoint</td>
<td>Dalian University of Technology</td>
<td>Wang Ruixiang, Jin Zengrui, Li Keyi</td>
</tr>
<tr>
<td>Voice of the Left-behind</td>
<td>Heilongjiang University</td>
<td>Wang Wenhe, Li Cai, Zhao Guan</td>
</tr>
<tr>
<td>Easy-life Smart Home Automation</td>
<td>Zhejiang University/UIUC</td>
<td>Wang Zhen, Xiao Ziang, Shen Zheng</td>
</tr>
<tr>
<td>Card Memory</td>
<td>Shanghai Business School</td>
<td>Xiao Shifei, Liu Xueqing</td>
</tr>
<tr>
<td>Targeted Support for Farmers</td>
<td>Changchun University of Technology</td>
<td>Xing Zengqiang, Yu Youmei, Xu Pengwei</td>
</tr>
<tr>
<td>Young Psychology</td>
<td>Northwestern Polytechnical University</td>
<td>Xu Jiexiong, Zhu Xinyun, Bai Yutong</td>
</tr>
<tr>
<td>Make Some Noise</td>
<td>Zhejiang University</td>
<td>Xu Kaiyan, Ye Lu, Wang Jiaqi</td>
</tr>
<tr>
<td>Hide the Knife to Save the Mother</td>
<td>Dalian Nationalities University</td>
<td>Yan Zhibo</td>
</tr>
<tr>
<td>Comprehensive Medical Service Platform</td>
<td>Changsha Medical University</td>
<td>Yang Zhiyin, Yang Zijian, Ding Ziyang</td>
</tr>
<tr>
<td>Taskiller</td>
<td>Zhejiang University</td>
<td>Ye Wei, Bien Jiameng, Chen Yukai</td>
</tr>
<tr>
<td>Microfluidic Sponge Smart Urban Travelling</td>
<td>Wuhan University of Science and Technology</td>
<td>Yu Ran, Li Yaxin, Wang Yue</td>
</tr>
<tr>
<td>Security Monitoring Client for Villages and Townships</td>
<td>Suzhou Institute of Trade &amp; Commerce</td>
<td>Zhang Bo, Hu Yingting, Chang Wenxiang</td>
</tr>
<tr>
<td>Mood-control Smart Lighting System</td>
<td>Hohai University</td>
<td>Zhang Shu, Chen Yansong, Li Zhen</td>
</tr>
<tr>
<td>Essence</td>
<td>Hangzhou Dianzi University</td>
<td>Zhang Zhenkai, Zhu Haiyi, Jiang Baiyan</td>
</tr>
<tr>
<td>By the Mirror-An Interactive Virtual Navigation App</td>
<td>Zhejiang University City College</td>
<td>Zhang Junyi, Chen Mengxi, Wang Heng</td>
</tr>
<tr>
<td>Happy Housekeeping</td>
<td>Zijin College, Nanjing University of Science &amp; Technology</td>
<td>Zhang Xinyu, Zhang Zewei, Cao Xi</td>
</tr>
<tr>
<td>Pece</td>
<td>Tianjin Normal University</td>
<td>Zhao Yiqin, Liu Jingyu</td>
</tr>
<tr>
<td>Source Power</td>
<td>Heilongjiang University</td>
<td>Zhu He, Wang Yu’an, Hou Yangyang</td>
</tr>
<tr>
<td>Babe’s Contact Book</td>
<td>Tamkang University</td>
<td>Chen Jiayu, Lan Zhiming, Lin Shichang</td>
</tr>
<tr>
<td>Live Weather Report</td>
<td>Feng Chia University</td>
<td>Ruan Yangzhou, Chen Weihan, Jing Fuxiang</td>
</tr>
<tr>
<td>ARK</td>
<td>National Taipei University of Education</td>
<td>Shi Lichi, Wu Shangrong, Song Wanling</td>
</tr>
<tr>
<td>Just a Moment</td>
<td>Feng Chia University</td>
<td>Zhang Yun, Zhang Shuming, Wang Weiqiang</td>
</tr>
<tr>
<td>Class Quest</td>
<td>National Cheng Kung University</td>
<td>Zheng Yujie, Xu Chenjun</td>
</tr>
</tbody>
</table>
After the final round, the winners stood out:

**1 Grand Prize:** “Faces of Peking Opera” from Tongji University

With the latest iOS technology and an innovative form, it demonstrates the historic and cultural as well as aesthetic values of Peking Opera. It is praiseworthy for its originality and social values.  
-- The Reviewing Panel

**3 First Prizes:**  
- “Step Beats” from Zhejiang University  
- “Recommending the Best” from Nankai University  
- “Babe’s Contact Book” from Tamkang University

Based on machine learning algorithms, it has innovated on the mode of musical composition, and it boldly explores the influence of nonlinear logic such as machine thinking on human aesthetics.  
-- The Reviewing Panel

It focuses on the difficulty of choice in online shopping. With functions such as “Smart Customer Service,” it greatly increases the shopping experience. A timely solution to a hot issue.  
-- The Reviewing Panel

The entry reflects the idea of “making life easier with technology” and brings some comfort and warmth to people’s life.  
-- The Reviewing Panel
8 Third Prizes:

- “Easy Parking: Fast Parking App” from Shanghai Ocean University
- “Pece” from Tianjin Normal University
- “Microfluidic Sponge Smart Urban Travelling” from Wuhan University of Science and Technology
- “One Picture” from Guangzhou University
- “Class Quest” from National Cheng Kung University
- “De-Chinese” from Shanghai Business School
- “Live Weather Report” from Feng Chia University
- “Words of Sand” from Zhejiang University
IV. Advance Education through Collaboration

The 2017 Higher Education Department of MOE (HEDME)-Apple Industry-Academic Collaboration and Collaborative Education Project was launched during the final of the Contest. The heads of several departments of Apple, including Governmental Affairs, R&D, HR, Sales, Marketing and Developer Relations, discussed the experience of organizing, implementing and managing programs with teachers and experts from over 30 universities. Together they looked forward to the bright future of industry-academic cooperation.

The HEDME-Apple Industry-Academic Collaboration and Collaborative Education Project includes five programs: Reform in Teaching Content and the Curriculum Structure; Teacher Training; Improving Conditions for Practices; Off-campus Practicing Bases; Reform in Innovation and Entrepreneurship Education. In 2017, it will focus on 25 programs including “ICT and Intellectual Property Protection” and “Everyone Can Code.”

In the launching ceremony, program directors from Apple and representatives of the Teaching Steering Committee of MOE presented certificates to the 25 programs selected for the 2017 Industry-Academic Collaboration and Collaborative Education Project. Zhang Long, Member of the Expert Panel of Industry-Academic Collaboration and Collaborative Education Project of MOE and Deputy Director of the Department of Science and Technology of Higher Education Press, explained about the plan to manage and carry out the programs. Professor Jiang Jianwei, Deputy Director of the MOOC Promotion Office at Shanghai Jiao Tong University, delivered a speech on “Promoting the Integration of Industry and Education, Urging Educational Innovation——Primary Exploration on the Results Application Model.” Liu Gang from Xi’an Jiaotong-Liverpool University and Li Zhuang from the Attached Elementary School to Jilin University shared their experience with the programs in 2016. Chen Jian from China University of Political Science and Law, Chen Guang from Beijing Normal University, Yang Qing from Central China Normal University, Zhu Hongming from Tongji University, and Song Xiaoguang from Shanghai Business School explained about their respective plans to carry out the programs in 2017. Program directors from five departments of Apple explained in detail about the progress and planning of the programs such as Everyone Can Code, iOS, Professional Training, Cooperation with Universities, etc.
V. A Profound Influence

- **Wu Aihua, Director of the Division of Science and Technology, Higher Education Department, Ministry of Education**
  A contest of high quality like the Mobile Application Innovation Contest is worth the efforts. It shows Apple’s increasing activity in the field of higher education.

- **Isabel Ge Mahe, Vice President of Apple, Managing Director of Greater China**
  We are happy to see an increasing number of young people showing their talent and potential in the Contest. Their creativity will help the world become a better place. I wish more successes for the Contest.

- **Prof. Ren Shaobo, Executive Vice-President of Zhejiang University**
  This competition has shown us that those of the young generation are charging forward to make their dreams come true and working hard toward innovation, and thus, we see the hope of a bright future for the Internet and mobile App industries. The entries were a wonderful display of the creativity and drive of the students, which is precisely what is needed in the Internet era.

- **Prof. Jiang Zongli, Director of Organizing Committee of China Collegiate Computing Contest**
  For this competition, one of the highest-level contests in China, The students honed their thinking skills and hands-on capacity through the competition, experiencing the joy of making it to the top. Just as expected by the organizers, students learned to discover real-life problems and used technology to solve the problems and to serve society. This contest lays a foundation for the future development of these university students and is also highly recognized by MOE and the society.
Prof. Chen Wenzhi, Director of Information Center, Zhejiang University
There was a significant boost in its influence and the students’ enthusiasm for innovation. We hope that this contest will find more computer professionals and Internet talents, and provide more platforms for competent and creative young people to show themselves, challenge themselves and live their dreams. We wish all participators can keep their enthusiasm for the mobile App design and shine in mobile Internet.

Yu Zhihong, CSR Chief Expert of GoldenBee
I have observed the reviewing process of 22 entries. The students were impressive; so were the comments and suggestions of the experts. This shows Apple’s CSR idea of "responsibility along with innovation" in China.

Leo Shi, an employee of Apple Store in Hangzhou
When Sam (an optically challenged employee of Apple) started VoiceOver and made his iPhone read aloud "we believe that technology means happiness for everyone," all developers who came to the event at the Apple Store were greatly inspired.
Zhejiang News
This Contest showed an interdisciplinary and cross-border trend. The participators also showed more concern for social issues and in-depth thoughts on hot issues such as psychological health, cultural heritage, left-behind children, etc.

Qiushi News
The Mobile Application Innovation Contest encourages students to apply innovative technology and to care about hot social issues and people’s livelihood. It nurtures university students’ love for life and concern for society.

IT.SOHU.COM
All you need is one computer to get connected with the world and to start up a business. Through independent innovation and by creating their own App products, university students can obtain knowledge and experience that they cannot get on campus. It is like watching your own child grow up, and that’s the most valuable thing. And if you have the chance, you can continue working on it and turn your interest into a career.

The entries in the Mobile Application Innovation Contest must be original application programs with practical functions. These Apps must be designed and developed based on the iOS and Apple’s product portfolios and development tools. Apple encourages participating teams to download and use Swift as the language for development. The entries must focus on the Contest’s recommended areas of application and hot and difficult issues of social concern. Participators can choose their own subjects. They will collect and acquire relevant data and provide a solution that can be run on a mobile device.
Apple advocates the development of students’ potential via stimulating curiosity, inspiring creativity, and giving free reign to the imagination. In China, it is actively working to push a national strategy of innovation in education, fully applying its technological capacity in integrating top-quality educational resources from home and abroad. In close collaboration with government agencies, educational institutions, authors of educational curricula and materials, and other technology companies, Apple brings cutting-edge technology into classrooms, actively promotes mobile learning and personalized learning, and helps pushing innovation in education. A fine example of what businesses can do in collaborative education, it works with academia to foster entrepreneurship and innovation.

Students at Chinese institutes of higher education are working to bring about the unthinkable. Even before finishing their studies, more and more of them are forming teams and putting the Apps they have created online.
1. About the Contest

China Collegiate Computing Contest (C4), a technology contest for students from universities throughout China, is co-hosted by the MOE’s Collegiate Computer Science Education Steering Committee, Collegiate Software Engineering Education Steering Committee and Collegiate Computer Courses Steering Committee, along with the National Research Council of Computer Education in Colleges & Universities. In 2017, the Contest consisted of four modules, among which the Mobile Application Innovation Contest was co-hosted by Zhejiang University and Apple.

The Mobile Application Innovation Contest, as one of the modules of China Collegiate Computing Contest, aims to promote reform in teaching contents and teaching methods for collegiate computer courses, to bring out students’ creativity, to improve students’ computer skills for analyzing and solving problems, especially the skills to design and develop mobile applications, to foster the spirit of teamwork, to raise the teaching standards for collegiate courses related with mobile application development, to promote exchanges among universities, and to enrich the academic atmosphere on campus. The 2017 Contest encouraged inter-university cooperation and welcomed participation from universities all over the world.

In the First Mobile Application Innovation Contest, Tim Cook and Lisa Jackson attended the Award Ceremony for the Grand and First Prizes held in Shenzhen in October 2016. They presented the prizes to the winning teams and had friendly conversations with the winners. Representatives of the winning teams were invited to attend WWDC17, and exerted huge influence.

2. Objectives

- To bring out students’ creativity and arouse their social responsibility;
- To improve students’ skills in iOS designing, and to nurture their interest in Apple products and technologies;
- To encourage the next generation of developers to find solutions to social issues with advanced mobile App technology;
- To promote reform in the contents and methods for collegiate computer education and to improve courses related with mobile application development;
- To develop a way for long-term development, to spur business growth, and to set up a positive ecological circle for Apple;
- To solidify Apple’s leading position in technology as well as responsibility;
- To support innovation and entrepreneurship in line with China’s national agenda for education for a win-win outcome.

3. Rules and Regulations

Registration

A team intending to participate in the Contest can register on the Contest’s website (http://www.c4top.cn). All participators must be registered students of colleges or universities. The participating team should fill in the Form of Registration online. The form should be printed out and be stamped by the administrative department of the university or college, before being scanned and submitted in the digital form.

Notes:

1. The entries must be an original work of the participator(s). The Organizing Committee has the right to request proof for its originality. Cheating in any form will lead to cancellation of all related awards and prizes, and the participators will be responsible for all possible consequences.
2. Each team can have a maximum of three members. In principle, each team has only one chance for adjusting its members. If so, the adjustment should be submitted in the written form to the Expert Panel no later than one week before the final. The adjustment takes effect only when approved.
3. Each participating team should be led by one coach, who must be a faculty member of the college/university to which the team belong. A coach can represent more than one team and is responsible for the instruction and communication during the Contest. The coach must confirm that all members are qualified according to the Contest’s rules and regulations.
4. The deadline for registration is the May 22, 2017.

About the Entries

The entries for the Contest shall be an original application (App) with a particular function. The App must be designed and developed based on the iOS and Apple’s product portfolios and development tools. The participating teams are encouraged to download and use Swift as the language for development. The entry must focus on the Contest’s recommended areas of application and hot and difficult issues of social concern. Possible areas include but are not limited to industry, agriculture, health care, environmental protection, flood control and disaster relief, education, senior care, administration, safety, and big data, etc. Participators can choose their own subjects. They will collect and acquire relevant data and provide a solution that can be run on a mobile device. Each participating team must submit its entry to the Contest’s official website, along with an entry description as required by the Contest’s rules and regulations.
The participating team can change, improve or update the submitted information any time before the deadline of the registration. The entry can be first submitted in different formats, which include but are not limited to App descriptions, App effect graphs, posters, and video clips. When a team has entered the second round, the entry it submits should include the design document, the source code, and the App that can be run on a mobile device. In the final round, the entry can be improved but the subject and the content should not be changed. The final version of the entry should be submitted according to the Contest’s rules and regulations. Apple will provide necessary technical support for the teams that have entered the final round when they prepare to demonstrate their Apps. (Apps that have entered the final round should be demonstrated on site).

Reviewing

The Contest consists of three stages: the first, second and final rounds. The names of the judges are drawn randomly from the database of judges. The Organizing Committee will inspect the reviewing process in line with the principles of fairness and justice. The first and second rounds are reviewed online. The final round will be held in the form of on-site oral defense. The rubrics for reviewing are listed below:

1. Basic parameters: 30 points
   (1) Functions
   (2) Reliability
   (3) Smoothness

2. Innovations and special features: 40 points
   (1) Design concept
   (2) Interface design
   (3) Interaction design
   (4) Subject and others

3. Prospects: 20 points
   (1) Significance: the users’ demand
   (2) Values: popularity in the market

4. Completeness and quality of the files: 10 points
   (1) Completeness (function description, model design, App demo, etc.)
   (2) Quality of the files.

Note:
If the entry is not completed during the Contest, points will be deducted according to the specific situations. The points of each round will not be passed on to the next round.

Awards

The results of this Contest will be verified by the Expert Panel and will be announced on the Contest’s official website. The certificates of awards will be printed and issued by the Organizing Committee. The Award Ceremony will be held when the reviewing of the final round is finished. The Contest sets the following prizes:

1 Grand Prize;
3 First Prizes;
5 Second Prizes;
8 Third Prizes;
33 Honorable Mentions;

4 Prizes for the Excellent Coaches to be awarded to teachers who led the winning teams of the Grand and First Prizes;
4 Prizes for the Excellent Organization to be awarded to universities and colleges with the most teams that have entered the second and final rounds.

In the ten days after the announcement of the results, the Organizing Committee will be open for complaints against the award-winning entries. The complainant must provide his or her real names, employer information, contact information and detailed evidence of the relevant participating team’s violation of rules. Upon reception of the complaint, the Organizing Committee will start an investigation. Once the violation is confirmed, the relevant team’s award will be recalled and the results of the Contest will be adjusted accordingly. The Organizing Committee will protect the complainant’s right of privacy according to the law.
4. Positive Feedback from Teachers and Students

During the Contest, the Organizing Committee conducted a survey among participating students and teachers as well as other relevant parties, and received from them active and positive feedback on the events and organization of the Contest.

- **Structure of the surveyed:**
  - Participating students: 68.96%
  - Coaches: 17.24%
  - Judges: 5.75%
  - Staff members: 8.05%

- **How people knew about the Contest:**

  About 74.71% of the participants heard about the Contest from teachers and students. The Organizing Committee should keep this in mind and work on increasing the influence and appeal of the Contest among teachers and students in 2018.

- **Attention to the website and the WeChat official account:**

  Over 80% of the teachers and students followed the Contest’s official website and WeChat official account. This shows the participating students’ and the coaches’ great interest in keeping up with Organizing Committee’s announcements. Based on this, it can be concluded that in the 2018 Contest the WeChat platform needs to post messages more regularly and that the Contest’s website should be more reliable, in addition to this year’s new functions and other improvements. It is also necessary to properly coordinate the website’s relation with the official website of China Collegiate Computing Contest and to handle the issues of authority in collaborative management.
Degree of satisfaction with the promotional materials:

The promotional materials of this year have space for improvement in both the design and content. In 2018, it is necessary to confirm as early as possible all relevant information regarding the arrangement of the final round. The stuff design should also be prepared ahead of time.

Degree of satisfaction with the staff:

As high as 97.7% of students and teachers were satisfied with the staff of the Contest, a great approval and encouragement for the organizing staff. In the next year, more detailed arrangement for volunteers’ work will be implemented.

Degree of satisfaction with the venue and the organization:

More detailed should be planned for the setup and organization during the Contest. More images about the Contest and more event guides can be put up at the venue.

Degree of satisfaction with food and accommodation:
Degree of satisfaction with the transportation between the venues of the contest and the residence:

Disagree: 0%

Agree in general: 13.79%

Highly agree: 86.21%

Degree of satisfaction with the reviewing process:

The newly added open and live reviewing was a bright spot of this year’s Contest. In the Contest next year, the process of judge selection, the reviewing rules and methods will be further optimized.

Disagree: 2.3%

Agree in general: 33.33%

Highly agree: 64.37%

Degree of satisfaction with the Apple events:

Over 70% of the participating students were very satisfied with their involvement in the Apple-related activities. Next year the events during the final can be even more diverse.

Unsatisfactory: 0%

Generally satisfied: 29.89%

Very satisfied: 70.11%
Degree of satisfaction with components of the Contest:

The open oral defense was one of the Contest’s bright spots and made a far-reaching influence. Most participating students agreed that this component of the Contest provided them with a great chance for learning from each other and they hoped that it would remain in the next year’s Contest. The live broadcast of the open oral defense made it possible for the students who were not able to be present to feel the on-site atmosphere.

Degree of satisfaction with what’s learned from the Contest

Over 95% of the participating students thought that they had learned a lot from the Contest. This is another direct approval of the Contest, aside from the satisfaction with the Contest in general.

Degree of satisfaction with the Contest in general

The Contest in general was thought highly of, with close to 90% of the participating teachers and students expressing satisfaction. In the following year, details in all aspects of the Contest can be further improved so that the participators can be more engaged in the Contest.
Mobile Application Innovation Contest

For more information, please follow us in the following ways:
The Official Website of the contest: http://www.appcontest.net
Click to download video clips of the 2017 contest.

WeChat account
Weibo account

Contact Information
Tel: 0571-87953863
Email: channy@zju.edu.cn