School of Computer of Science

ASSIGNMENT BRIEFING SHEET (2016/17 Academic Year) – ANONYMOUS MARKING

Assignment Title	Mobile App Design for Preschool Education Using Xcode	**Submission Date**	24/03/2017
Module Title	Mobile Computing	**Module Code**	6COM1047
Tutor	**Cherry Che**	**GROUP or INDIVIDUAL Assignment**	**Individual**

FOR INDIVIDUAL ASSIGNMENTS – *STUDENT TO COMPLETE*

By completing **BOX A** below, I certify that the submitted work is entirely mine and that any material derived or quoted from the published or unpublished work of other persons has been duly acknowledged. **[ref. UPR AS12, section 7 and UPR AS14 (Appendix III)].)].** I also certify, that any work with human participants has been carried out under an approved ethics protocol in accordance with UPR RE01.
*Please **ONLY** provide your ID (srn) number as this assignment will be anonymously marked*

BOX A

Student ID Number (SRN)

This sheet must be submitted with the assignment, and either BOX A filled in.
LATE SUBMISSION WILL ATTRACT A STANDARD LATENESS PENALTY.

1. For undergraduate modules, a score of 40% or above represents a pass mark.
2. For postgraduate modules, a score of 50% or above represents a pass mark.
3. For work submitted up to 5 working days late marked is capped to a bare pass (40% for undergraduate and 50% for postgraduate).
4. For work submitted more than 5 working days a mark of zero will be awarded for the assignment.

Regulations governing assessment offences including Plagiarism and Collusion are available from:
http://sitem.herts.ac.uk/secreg/upr/pdf/AS14-Apx3-Assessment%20Offences-v06.0.pdf

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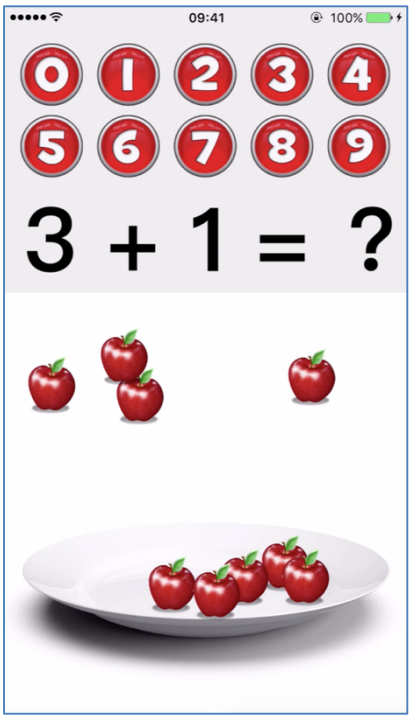
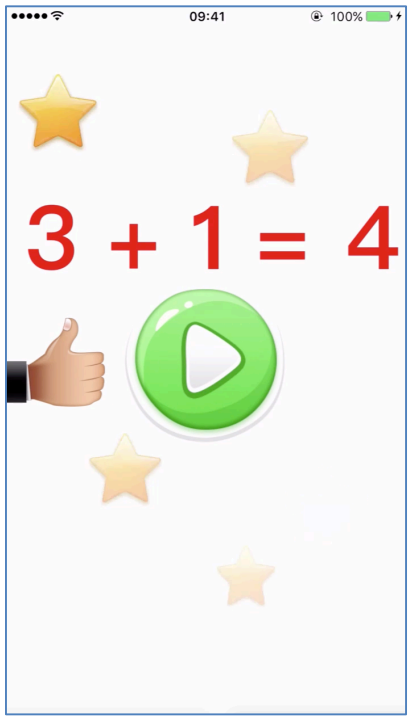
ANONYMOUS MARKING

THE ASSIGNMENT TASK:

The task of this assignment is to develop an iOS mobile app using Xcode platform. The app is intended for preschool education purpose. In this assignment, you need to implement an app helping children learn to perform addition in math.





Target Users: Preschool children

Design Strategy: The message you should send across to the users is that the addition of two numbers can be operated by counting the total number of objects that each of the two numbers refer to. As shown in the screenshot on the left, the middle section gives a quiz that the user needs to work out. Each number is in the range of 0 – 4 and is chosen randomly in every quiz. The bottom part is a plate of apples where each apple can be touched and dragged by the children between the plate and the white space. The purpose of this is to help children understand addition with their perception level.

The top section contains numbered buttons that the user can select for the result of the quiz. Once a correct result is selected, a greeting screen will be displayed as shown in the screenshot on the right. There is a sizeable button in the middle of the screen for the user to tap for a restart of the game. The pictures above represent my solution for the app, however you may wish to have a different design if you like.

Usability Requirement:

- It is expected that children who use this app for the first time may require simple coaching from the adults. After that, the app should be easy enough for them to play on their own, and appealing enough to keep them playing.
- A highly usable app should be able to run on any iPhone models of any screen size.

Showcase Video: You can view the showcase video of this app on Studynet. This video gives you a brief idea of the effect you should aim to achieve, although you do not have to design exactly the same interface as shown in the demo video. If you have better ideas, you are welcome to give a try.

Resources: The images you can use for this app development are available on Studynet. These are the images used in the showcase. You can use other image sources if you like.

Tools: This coursework is mainly based on the teaching of Xcode and intended for the development within iOS system. Nevertheless, you can still choose to use JQuery mobile to complete this coursework if you wish, although self-learning would be essential for this option and only minimum help will be provided by the tutor. Cherry is responsible for the Xcode part of the teaching and Steve is in charge of the JQuery Mobile part.

Report: You need to submit a written report at the end of this project containing the following three sections:

1. Self-evaluation of the app you designed, reflecting the usability and future improvements (max 800 words, excluding references). Please note this is a usability report, not a user manual.
2. Screenshots of your Trello usage **
3. Screenshots of your Github usage **

*** Screenshots should be captured once a week. You can capture one (or more than one if you need to) to demonstrate your current development status. You can add a few texts or annotations to highlight the differences compared to the previous week.*

MODULE LEARNING OUTCOMES ASSESSED BY THIS ASSIGNMENT:

a. Knowledge and Understanding:
Successful students will typically have a knowledge and understanding of:

[2] Principles of mobile operation and usability
[3] Development and evaluation practices in mobile development

b. Skills and Attributes:
Successful Students will typically be able to:

[4] Write an app using a well-supported mobile platform and development environment
[5] Handle issues of connectivity, user experience, accelerometry and location awareness in mobile programming [6] Critically evaluate the usability of a mobile app

SUBMISSION REQUIREMENTS:

This is assignment is to be submitted and marked anonymously. Students should ONLY use their student ID number to identify themselves on their work. Work submitted via StudyNet for anonymous marking will automatically have an anonymity number allocated to it.

- During the development process:
  - Devise and manage tasks with Agile practice via Trello.com. Please name your project in the format of **[Student ID] - Project Name**. Add x.che@herts.ac.uk as a member of your project.
  - Back up every version of your app via github.com. Please name your project in the format of **[Student ID] - Project Name**. Add username **cherryche** as a collaborator of your repository.

- Final submission should be made online via Studynet. All files should be zipped together as one file, namely **[Student ID] - Project Name**. The zip file should contain:
    - Your final Xcode project.
    - Written report.

- Demo:
    1. Please use your UoH credientals to login to Office 365. And go to Videos → Channels → 6COM1047 – Mobile Computing
    2. Record a video that is up to 3 minutes showing how your app runs. Name your video using the format of **[Student ID] - Project Name.**
    3. Upload the video to the channel. If you have no permission to do so, please contact me.

FEEDBACK FROM THIS ASSIGNMENT

Each individual student will receive a written feedback about this assignment, as well as marks awarded based on the criteria set in the next section.

MARKS AWARDED FOR:

Components	Marks
Functionalities and Reliability	40%
Development Practice	10%
Usability Practice	30%
Usability Analysis	20%
Total	100%

- **Functionalities and Reliability:** the programming exercise to achieve the required functionalities; reliability refers to the smooth and error-free running of the app
- **Development Practice:** agile management; repository with version control
- **Usability Practice:** friendly user interface for the targeted user group; a highly-usable app for any iPhone models
- **Usability Analysis:** self-reflection of the app design and implementation; discussion of future improvement

Please see next page for the detailed grading criteria.

Grading Criteria

	Functionalities and Reliability (40%)	Development Practice (10%)	Usability Practice (30%)	Usability Analysis (20%)
1:1	A full list of required functions including image display, number tapping, image dragging, result verification, result display, and restart the game. The app can run smoothly. No crashes or errors after repeated testing.	Well-planned task cards on the Kanban list. Frequently updated lists according to the progress. The project management schedule complies with the version control repository.	Appealing graphic interface. Easy-to-operate functionalities. Thoughtful design with the right sized images and view displays. Engaging interaction (e.g. some animation effect). Screen-fit programming compatible with any iPhone models.	In-depth evaluation of the app design and implementation. Theory models applied to the analysis. Future improvement fully discussed. Proper references used.
2:1	Not all the functionalities have been implemented, but with a few improvements the app would be a ready-to-sell product of this kind. The app can run smoothly for the first or second time, but there may be some errors or crashes after repeated testing.	Well managed project on weekly basis overall.	User-friendly interface. Might be lack of animation but still delivers a delightful graphic effect. Relatively easy to operate for a child. May work well on certain screens but not others.	Commendable quality of work containing all relevant analysis and discussions. May be lack of critical analysis. A minor effort of improvements still required.
2:2	Partial functionalities have been implemented. The app can run most of the time. There may be occasional crashes.	Genuine attempt on the agile management and version control but with relatively large time gap.	Some parts of the app may be not very straightforward to use. Graphical effect is relatively dull. Not compatible with all iPhone models.	Satisfactory level of understanding. Proper concepts are demonstrated with evidence.
3rd	Genuine attempt on the app, but many modules are incomplete. The app is capable of running, but may be stuck in a few states during operations.	Only a couple of backup and project management attempts during the 8 weeks of development process. Mismatched or doubtful submissions made.	The app is hard to manipulate for a child user. The graphic interface is boring for young-aged user group. The screen layout is not even working well on one particular model.	Brief discussion on the subjects. Familiarity with the usability concept, but unable to form an evaluation.
Fail	The app does not run at all.	No exercise towards agile management and version control. Fabrication of the process.	A non-working app submitted.	Very brief text on the subject. Academic dishonesty.

DEADLINES AND ASSIGNMENT WEIGHTINGS

1 This assignment is worth *45%* of the **overall assessment** for this module.

2 You are expected to spend about *60* Hours to complete this assignment to a satisfactory standard

3 Date assignment set	24/1/2017	Date completed assignment to be handed in	17:00 GMT, 24/3/2017
4 Target date for return of marked assignment	21/4/2017		

INTERNAL MODERATION

This assignment has been internally moderated. I confirm: • That the assignment set, meets the requirements of the module and that the brief provides appropriate content for students to successfully complete the assignment. • That the assessment is at an appropriate level and matches QAA level descriptors and is an appropriate form of assessment within the total range of assessments for this module. • That the marking scheme is attached and that students can determine how marks are allocated. • That this assessment can be completed **and** marked within University timeframes, and provides detailed feedback (more than just a grade) that supports learning. .	***Moderator name, signature and date***