THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

<u>Interim Report (March 2015)</u>

Report due 31 March 2015.
Please return by email to Carol Chiu carol@itsc.cuhk.edu.hk

<u>PART I</u>

Project title: **<u>Programming Hands on Practice for Foundation-Year Students</u>**

Principal supervisor: **<u>Dr. WONG Tsz Yeung</u>**

Department / Unit: **<u>Department of Computer Science and Engineering</u>**

Project duration: From January 2015 to August 2015

Date report submitted: March 30, 2015

Amount Granted: **<u>HKD $88,000.00</u>**

1. Project objectives

The objective of this project is to allow every foundation year students accessing web-based lectures for the course *<u>ENGG1110 – Problem Solving by Programming</u>*. Instead of filming a series of 45-minute long lecture-based videos, each topic will be well formatted into a series of 5-10 minutes long micro modules.
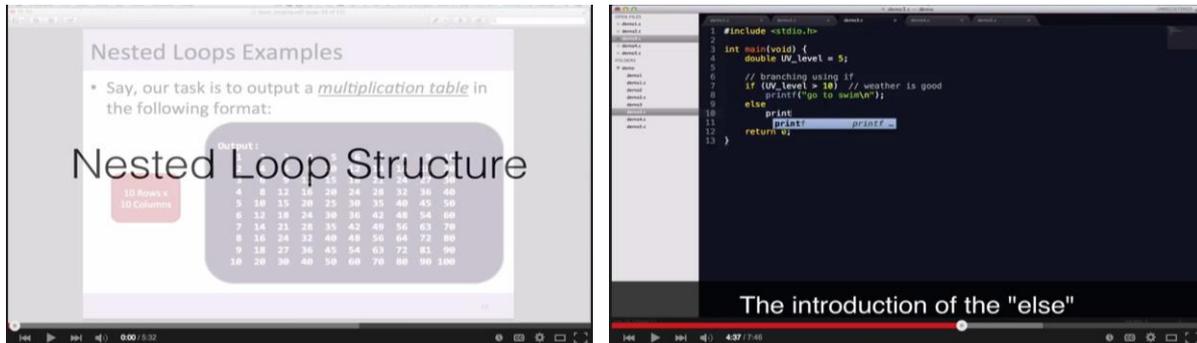
We are still working towards our project objectives. Currently, we have purchased *<u>Macbook Pro</u>* for the production and was arrived in early February, 2015. We primarily use the software called *<u>ScreenFlow</u>* in order to produce the micro-modules. The videos will be hosted on YouTube. As you may have concerned about the copyright issue, all the materials in the videos are made by Dr. TY WONG without referring to any copyrighted materials.

2. Progress on process, outcomes or deliverables

So far, I have produced eight modules.

1. If-then-else on C programming language:
    a. Module 1: on Logical and Relational Operators.
    b. Module 2: Complex Examples on Logical and Relational Operators.
    c. Module 3: Writing If-then-else Statements.
    d. Module 4: Complex Examples on Nested If-then-else Statements.

2. Loops:
   a. Module 1: Basic Syntax on While Loop.
   b. Module 2: Examples on While Loop.
   c. Module 3: Basic Syntax on For Loop.
   d. Module 4: Nested Loop Structures.

Figure: Splash Screen (Left) & Annotation (Right).

As a piece of sharing to the committee, the production is not as smooth as I thought. To produce one micro-module of 10-minutes long, it took me more than 40 minutes, on average, before I could publish it. The pre-filming and post-filming tasks include:

- Script preparation.
- Storyboard and module design (that means how to design and to cut a big topic into small videos).
- Effects include splash screen and annotations.

Though the time is a main issue, a piece of good news is that I did not encounter any technological difficulties. Given that there are still four months ahead, I am confident that I can produce as many modules as the course needs and publish them to the public.

3. Evaluation Plan

As I have released the modules to the elite class of size 10 privately before. Then, I gave them exercises on the topics one week later. They can all learn the materials well with the micro-modules alone. It is an encouraging piece of news.

However, this is a biased experiment as the students are the top students from our faculty. I need to try this experiment again with the normal students in the next semester.

4. Dissemination (reports, websites, video links, products, etc.)

For the sake of this interim report, I exported the four modules on the topics of If-then-else statements. YouTube Playlist Link:

https://www.youtube.com/playlist?list=PL1AQwE-TAr-d8Y4vuNOQmBVC2V7rseXOO