**VT6002CEM Mobile App Development**

**The application of traditional dough figurine introduce and shop**

How to implement the application to introduce the user regarding traditional dough figurine and provide an online shop for them to order remotely?

**Yip Siu Yat – 217106365**

*Supervisor: Kwok Ko Yu*

***A project proposal*** *for a BSc Computing Mobile App Development(VT6002CEM) module coursework.*

**10th December 2021**

Table of Contents

1. [Introduction ……………………………………………………………………………………………………………….. 2](#Introduction)
2. [Platform ……………………………………………………………………………………………………………………… 2](#Platform)
   1. *[Comparison …………………………………………………………………………………………………………. 2](#Comparison)*
   2. *[Development Complexity ……………………………………………………………………………………. 2](#DevelopmentComplexity)*
   3. [*Tool Comparison …………………………………………………………………………………………………. 3*](#ToolsComparison)
3. [App Design Requirements ……………………………………………………………………………………………. 3](#AppDesignRequirements)
   1. [*Data Persistence ………………………..…………………………………………………………………….……. 3*](#DataPersistence)
   2. [*Usage of Hardware, API and Sensor ………………………..……………………………………….……. 3*](#UsageofHardwareAPIandSensor)
   3. [*Cloud Service …………………………………………………………………………………………………….…… 4*](#CloudService)
4. [Conclusion ……………………………………………………………………………………………………………….…… 5](#Conclusion)
5. [References ……………………………………………………………………………………………………………….….. 5](#References)

**1.** **Introduction**

Dough Figurine is one of the Chinese folk art, in the hands of skilled craftspeople, flour is well-cooked with their own secret recipe and made into lovely figurines or animals to be enjoyed and played within the hands, which brings special pleasure, and this is the traditional handcrafting called dough figurine. If I was to design a mobile app for Hong Kong traditional craftsmanship to help their survival in the twenty-first-century business environment, I would design the app starting with the topic of Hong Kong Traditional Dough Figurine Handcrafting. The true challenge lies in making them lifelike, good handicrafts need the devotion of artisans from one generation to another. However, this kind of handcrafting art in Hong Kong is fading out, to help them to sustain themselves, marketing is one of the biggest factors. The goal and objective of this assignment are to aid the traditional craftsmanship like Dough Figurine Making in Hong Kong can keep going and devoting their skills to the next generation, and the biggest reason of all is there are few people to create and develop an application of the craftsmanship in Hong Kong.

**2.** **Platform**

**2.1** **Comparison**

This application will be compiled on iOS and developed with Swift in Xcode in macOS, and the iPhone simulator will be used as the benchmark. Comparing iOS and Android, iOS is more efficiency than Android, and of course Swift in iOS is more easier to create the Android since coding in Swift requires less time and has higher readability than dealing with Java in Android.

**2.2** **Development Complexity**

Concerning the development complexity, Android loses by a big number. The device fragmentation of Android causes the issue, whilst Apple release a certain range of devices.

**2.3** **Tools Comparison**

Talking about the tool, when it comes to IDE, Android had two options which are Eclipse and Android Studio. Yet, Google stopped support for future update in Eclipse, also, Android Studio is new but not as stable as Xcode on macOS. For the tool in iOS, Apple provides developers with detailed guidelines for the creation of a UI for their apps. While it may be limiting to some, this approach generally ensures an exceptional UX.

**3.** **App Design Requirements**

**3.1** **Data Persistence**

To create an introducing or guiding application of information, there must be a great number of information to display and store. All of these data will be stored in Firebase to implement the data persistence.

**3.2** **Usage of Hardware, API and Sensor**

There are some features in this application, such as customise dough figurine, user can upload the photos of an item for the dough figurine by Photos library or taking pictures with the camera, then send the uploaded pictures to the server to complete the order. Regarding the API, there are some must-included APIs, for example, an API for uploading the photos to Firebase; retrieve information or context of a section from Firebase via an API; ordering API.

**3.3** **Cloud Service**

To enhance the efficiency of the application, cloud storage is necessary. Cloud storage helps an application save memory and space and prevents the innumerable information stored in the local of the device and from causing any unknown error, and also it is easier and more logical to update the information. Businesses utilising cloud computing to access information from anywhere around the world as long as there is connectable internet service and a compatible device instead of storing information on the local devices or servers in the workplace or office. Information is accessible from a central hub (such as a web-based hub) that allows anyone with proper credentials access permission, then they can retrieve the data or information from any location with an internet connection.

Fatal data loss can happen at any time any moment. Regardless of loss caused by power shutdown, hardware failure, security penetration attack, or even natural catastrophes, the situation of data loss is having an increment every year. At the same time, plenty of companies adopted backup plans using cloud service, it helps to have contingencies in place. By applying the cloud to store the important data, the data will be saved in the cloud and there is always backup even if hardware fails. Cloud computing has become a dominant model in the information technology (IT) field, these days, because of its potential to transform a large part of the IT industry. This technology has made the software more attractive as a service and shaped the way IT hardware has been designed and purchased. (Madhavaiah, Bashir & Shafi, 2012). There are also many libraries and middleware that help increment mobile application performance, in general, the middleware enhances the functionality, reliability, and compatibility of the interaction between mobile clients and Cloud Services (Neetesh Gupta, 2012). I reckon cloud computing in the mobile field can assist the globalisation development since data will be stored in the remote server that allows users to access or get the information from the server through the client-side of the application notwithstanding the location and which mainstream platform the user is using, as long as there is an Internet that can be connected to. Moreover, cost-efficient and effectiveness are some of the biggest points of all because the process of updating data or dealing with the coding logic will be easier and more effective than storing data in the local storage.

**4.** **Conclusion**

To conclude, the application of this assignment will be an introducing and ordering app for Hong Kong Traditional Dough Figurine Making. I will apply cloud service to the app such as remote data storing and retrieving, and using the hardware of iPhone for the application features, for example, the camera function and accessing Photos library function. The main feature will be customising a dough figurine for user by uploading the photos of the expected outlook of the figurine. By doing this assignment, I wish to help the traditional crafting like this can sustain in the 21st century business environment.

**References**

Madhavaiah, C. & Bashir, Irfan. (2012). *Defining Cloud Computing in Business Perspective: A Review of Research. Metamorphosis: A Journal of Management Research. 11. 50-65. 10.1177/0972622520120205.* :   
https://www.researchgate.net/publication/305190460\_Defining\_Cloud\_Computing\_in\_Business\_Perspective\_A\_Review\_of\_Research

Neetesh Gupta. (2012). *Cloud Computing vs Mobile cloud computing.*:   
https://www.researchgate.net/publication/344362981\_Cloud\_Computing\_vs\_Mobile\_cloud\_computing