

**香港中文大學**

**計算機科學及工程學系**

**Department of Computer Science and Engineering,**

**The Chinese University of Hong Kong**

**DevTour**

version no.: 1.1.0

date: Feb. 14, 2021

**Group ID: A5**

**CHANG Chirui 1155124553**

**DING Baizeng 1155124617**

**LYU An 1155124488**

**YU Yue 1155124490**

Supervised By

**Prof. LYU Rung Tsong Michael**

©2020 The Chinese University of Hong Kong

The Chinese University of Hong Kong holds the copyright of this proposal.

Any person(s) intending to use a part or whole of the materials in the thesis

in a proposed publication must seek copyright release from the University.

Contents

[1. INTRODUCTION 3](#_Toc64191810)

[1.1.Project Overview 3](#_Toc64191811)

[1.2Objective 3](#_Toc64191812)

[1.3.Expected Customers and Market 3](#_Toc64191813)

[1.4.System Features 3](#_Toc64191814)

[2. BACKGROUD 3](#_Toc64191815)

[3. SPECIFICATION 3](#_Toc64191816)

[4. SYSTEM ARCHITECTURE 3](#_Toc64191817)

1. INTRODUCTION
   1. Project Overview

The project, named “DevTour”, aims to build a platform for students, especially programming beginners, to play mini games to experience as a developer and to communicate with each other. Users can log in their accounts and continue to play in their original game archive, and also leave their own comments and walkthroughs in the chat board. Our vision is to let users, especially novices in programming, understand the experience of being a software developer and engineer through the story of the game, and to create a platform for beginners and masters to communicate and discuss.

The development cycle of the whole project is about three months, and the developers include CHANG, Chirui, DING Baizeng, LYU An and YU Yue. We will use web-based access client-server architecture to implement the project, which may involve front and end technologies, such as HTML5, CSS3 jQuery, Ajax, Node.js, ReactJS, MongoDB and so on.

This report provides high-level descriptions on some functionalities, features and architectural designs. It also introduces the project background, architecture diagrams and brief descriptions of some key components of the system.

* 1. Objective

The overall goal of the project is to build a multi-functional network platform for the majority of programming developers, which integrates game playing, entertainment, career planning and social interaction. We find that most computer science students or beginner programmers are unable to map out their career plans clearly, and it is difficult to find mentoring opportunities and guidance with experienced developers, therefore, “DevTour” aims to provide such a platform.

First, our game mechanic is that the player has to answer a series of questions about the developer's career path, including any dilemmas they might encounter along the way. Due to the different choices, the player's health will be changed accordingly. The player's health is represented by four values: mental health, physical health, money, and academic status. The player's goal is to try to keep these values as balanced as possible through different choices, neither too high nor too low. When the four values are above or below a certain range, the round ends. Thus, the number of choices successfully completed is the player's score for the round. In this game, the player has to balance the four values by considering the possible consequences before making each choice, so the process of choosing is a process of experiencing a career as a developer. The first objective of the project is to give novice programmers the experience of being a developer through games.

Second, players can exchange ideas and share game tips with other players in the chat board. Users can post their reviews, thoughts on the game, and playthroughs to a chat board where other users can read and comment. Therefore, the second objective of the platform is to create a common discussion platform for developers – beginners or masters.

Overall, the objectives of this project is to provide a platform for developers, especially beginners, to explore their career and meet new friends.

* 1. Expected Customers and Market

The main target customers of “DevTour” are the programming beginners, especially for students whose major is related to computer science and engineering. Of course, for some experienced software developers, they can also know more beginners through this platform and give their own help. The most important thing is to let beginners learn more about the profession through the story of the game and make more friends on the way of the career.

For the market on this platform, we will first promote the software in colleges and universities, so that students learning programming will first join this platform. Next, according to the feedback of students, we will gradually improve some functions and gradually push it into the market.

The number of potential users is huge due to the large number of new programmers entering the developer profession. At the same time, as the popularity of programming technology is increasing year by year, almost every professional will be exposed to programming and software development at some point in the future, so there is a huge potential market to be explored. Of course, this project can continue to update and add the story in the game after launch to attract more players to join, and at the same time, VIP mechanism and hidden story can be added to make profits.

* 1. System Features

1. BACKGROUD
2. SPECIFICATION
3. SYSTEM ARCHITECTURE