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| **CAPSTONE PROJECT 1** | | |
| **Project Title: “English For You”** | | |
| **PROJECT PLAN DOCUMENT** | | |
|  | **Code**  **Version**  **Date** | **:** E4U  **:** 1.0  **:**  2 - Nov - 2017 |
| **Fantastic 4 Team**  **Mentor :** Truong Tien Vu  **Member :** Tran Nguyen Huu Nghia  Do Van Truong  Doan Nu Thuc Oanh  Dinh Tran Anh Truc  **International School – Duy Tan University** | | |

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| --- | --- | --- | --- | --- | --- |
| **Project acronym** | Eng4you | | | | |
| **Project Tittle** | [E4U] English For You | | | | |
| **Start Date** | Aug 15, 2018 | | **End Date** | | Dec 5, 2018 |
| **Lead Institution** | International School, Duy Tan University | | | | |
| **Project Mentor & contact details** | Mr. Vu Truong Tien  Email: vudalat@yahoo.com  Tel: 0914083188 | | | | |
| **Scrum Master & contact details** | Nghia ,Tran Nguyen Huu  Email: trannguyenhuunghia97@gmail.com  Tel: 0934848229 | | | | |
| **Team members** | **Name** | **Email** | | **Tel** | |
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| Truc, Dinh Tran Anh | [Anhtruc2091997@gmail.com](mailto:Anhtruc2091997@gmail.com) | | 0947360347 | |

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| **Document Title** | Architecture Design Document | | |
| **Author(s)** |  | | |
| **Role** | Team Member, Scrum Master | | |
| **Date** | 2 – Nov – 2018 | **File name:** | ProjectPlan |
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| **Version** | **Person** | **Date** | **Description** |
| 1.0 | Team | 22-Sep-2018 | Draft |
| 1.1 | Team | 2-Nov-2018 | Edit and update |

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| **Document Approval**  The following signatures are required for approval of this document | | | |
| **Mentor** | Mr.Truong Tien Vu | **Signature:** |  |
| **Date:** |  |
| **Product owner** | Do Van Truong | **Signature:** |  |
| **Date:** |  |
| **Scrum master** | Tran Nguyen Huu Nghia | **Signature:** |  |
| **Date:** |  |
| **Team member(s)** | Do Van Truong | **Signature:** |  |
| **Date:** |  |
| Dinh Tran Anh Truc | **Signature:** |  |
| **Date:** |  |
| Doan Nu Thuc Oanh | **Signature:** |  |
| **Date:** |  |

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1. **Introduction**
   1. **Purpose**

* The purpose of the *Project Plan* is gathering all information necessary to control the project. It describes the approach to the development of the software and is the top-level plan generated and used by managers to direct the development effort.
* The following people use the *Project Plan*:
* The **project manager** uses it to plan the project schedule and resource needs, and to track progress against the schedule.
* **Project team members** use it to understand what they need to do, when they need to do it, and what other activities they are dependent upon.
* This document defines the approach to be used by the Project team to deliver the intended project management scope of the project.
* This document contains the details required to execute the project successfully. Once project execution begins, this plan will be reviewed, baseline, and updated on the regular basis.
  1. **Scope**
* This *Project Plan* describes the overall plan to be used by the *English for you*, including deployment of the product. The details of the individual iterations will be described in the Release Plans.
* This document will schedule the project plan into Work Breakdown Structure to let Product Owner easily review and manage Scrum team working and delivery on time.
* The plans as outlined in this document are based upon the product requirements as defined in the User Stories document.

1. **Project Overview**
   1. **Project Name**

The Project name is “***English for you***”. It makes sense because, The system helps players learn, practice and improve their English.

* 1. **Business Needs and User Needs**

**Business needs:**

The “English for you” will benefit:

* Players can improve their English skills and self-esteem is to what extent.

**User needs:**

The “English for you” will benefit user:

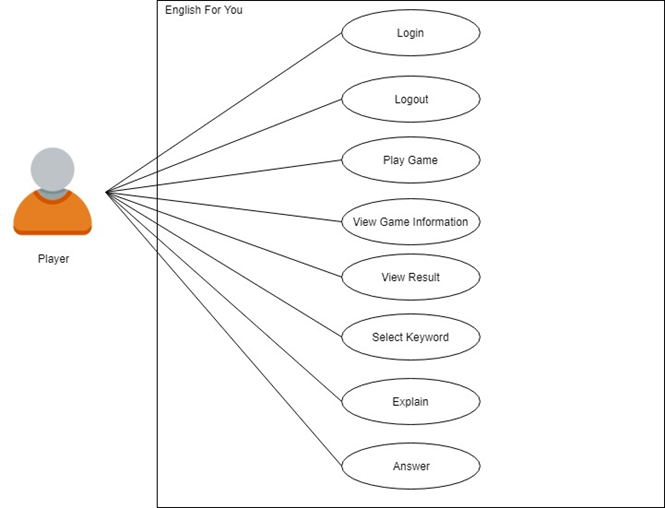
* Save on study costs and travel time
* Effective learning but still highly entertaining
* Flexible time and place
* Rich documentation and extensive repository
  1. **Project Member**

***The Project tem members are include:***

* Nguyen Tran Huu Nghia: Scrum Master and Scrum Member.
* Do Van Truong: Product Owner and Scrum Member.
* Dinh Tran Anh Truc: Scrum Member.
* Doan Nu Thuc Oanh: Scrum Member**.**
  1. **Project Duration**

E4U project begins on August 15th, 2017 and ends on December 05th, 2017.

* 1. **Project Scope**



***Figure 01: Project Scope***

* 1. **Project Goals and Objective**

1. **Game words explain**: The website will auto matching two people in one team in order to explain words and another will guess what that word is.
2. **Game Listen**: The website will choose a little piece of a random song for user hear and correct lyric of that song.
3. **Chat with foreign**: The website will list the users are online and user can choose the one you want to chat to.
4. **Translate**: The website can help user translate when user click right mouse on that word.

Additionally, with a friendly user interface, we will make user have better experience when using.

1. **Group Organize**

|  |  |  |  |
| --- | --- | --- | --- |
| **POSITION** | **NAME** | **EMAIL** | **MOBILE** |
| Mentor | Mr. Truong Tien Vu | [@gmail.com](file:///D:\WarningTeam_Capstone1_Official\nguyenthibaotrang@gmail.com) | (+84) |
| Scrum Master | Tran Nguyen Huu Nghia | [@gmail.com](file:///D:\WarningTeam_Capstone1_Official\thangquoctran.qb@gmail.com) | (+84) |
| Scrum Member | Dinh Tran Anh Truc  Doan Nu Thuc Oanh  Do Van Truong | [@gmail.com](file:///D:\WarningTeam_Capstone1_Official\lethienan3196@gmail.com)  [@gmail.com](file:///D:\WarningTeam_Capstone1_Official\hoanhvuzz@gmail.com)  [@gmail.com](file:///D:\WarningTeam_Capstone1_Official\thaosuong1599@gmail.com) | (+84)  (+84)  (+84) |

1. **Role and Responsibility**

|  |  |  |
| --- | --- | --- |
| **Role** | **Responsibility** | **Name** |
| **Mentor** | * Guide on the process. * Intoning all activities of Team. * Help with anything. | Mr. Truong Tien Vu |
| **Product Owner** | * Ensure that the team delivers the values to the business. * Hold the vision for the product. * Define the features of the product. * Give visibility regarding the scope of products. * Maintain a prioritized backlog for the product. Prioritize features according to business value * Decide the release date and content * Can change features and priorities every sprint * Accept or rejects work results * Supervise the work of each team member to ensure completion of the project. | Do Van Truong |
| **Team Members** | * Estimate time to finish task. * Analysis Requirements. * Design and gradually improve the design. * Coding and Testing. * Install and implement functions tests. * Deploy product. | All member |
| **Scrum Master** | * Define and Analysis application. * Assign work for team members. * Controlling and tracking team members. * Orientation for team members. * Make sure that the task is completed on time, scope and cost. * Protect the team work and avoid the troubles. * Provide solutions to solve problems. | Tran Nguyen Huu Nghia |

1. **Assumptions and Constraints**
   1. **Assumptions**

* Every member of the project team has a computer for use to work on the project.
* Every member of the project team is supported by mentor for any issues or problems.
* Every member of the project team has enough necessary skills to take part in project.
  1. **Constraints**
* Technical for Development

Technology: Nodejs , javascript , socket.io , mongoose

* Environment:

+ Operating system: Computer OS, any device used Web Browser.

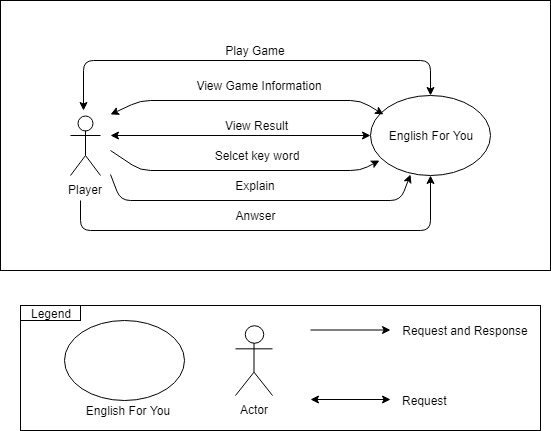
+ Develop tools: Sublime text 3

+ Source version control: Git.

+ Database: Mongodb

+ Internet Connection.

1. **Context Diagram**

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***Figure 02: Context Diagram***

* **User:** is the person who can use functions such as: play game, chat with friends, ect.. . After the user completes the function of the system will process.

1. **Project Schedule**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Task** | **Duration** | **Starting Day** | **Ending Day** | **Effort** | **Assign To** |
| ***1*** | **Initial** | **19 days** | **15-Aug-2018** | **03-Sep-2018** |  | ***Team*** |
| 1.1 | Gathering Requirement | 9 days | 15–Aug–2018 | 24–Aug– 2018 |  | Team |
| 1.2 | Create Proposal Document | 10 days | 28–Aug–2018 | 03–Sep – 2018 |  | Team |
| ***2*** | **Start Up** | **23 days** | **05-Sep-2018** | **27-Sep-2018** |  |  |
| 2.1 | Project Kick-off Meeting | 2 days | 05–Sep– 2018 | 07–Sep – 2018 |  | Team |
| 2.2 | Project Plan Document & Schedule Plan. | 2 days | 08–Sep – 2018 | 10–Sep – 2018 |  | Truong |
| 2.3 | Create User Story document | 1 days | 08–Sep – 2018 | 08–Sep – 2018 |  | oanh |
| 2.4 | Product Backlog Document. | 5 days | 08–Sep – 2018 | 08–Sep – 2018 |  | Truc |
| 2.5 | User Interface Document. | 1 days | 08–Sep – 2018 | 08–Sep – 2018 |  | Truong |
| 2.6 | Database Document. | 5 days | 08–Sep – 2018 | 08–Sep – 2018 |  | Truong |
| 2.7 | Architecture Design  Document. | 4 days | 08–Sep – 2018 | 08–Sep – 2018 |  | Oah |
| 2.8 | Test Plan Document. | 3 days | 08–Sep – 2018 | 08–Sep – 2018 |  | Nghia |
| **3** | **Development** | **61 days** | **28 – Sep** **– 2018** | **30– Nov – 2018** | 488h | ***Team*** |
| *3.1* | **Sprint 1** | 20 days | 28 – Sep – 2018 | 17 – Oct – 2018 | 76h | *Team* |
| 3.1.1 | Design user interface of Home page | 0,25 day | 28 – Sep – 2018 | 29 – Sep – 2018 | 1h | Nghia |
| 3.1.2 | Design Test Case for Homepage | 0,25 day | 28 – Sep – 2018 | 29 – Sep – 2018 | 1h | Oanh |
| 3.1.3 | Code front-end for Home page | 0,25 day | 28 – Sep – 2018 | 29 – Sep – 2018 | 1h | Nghia |
| 3.1.4 | Test for Homepage | 0,25 day | 28 – Sep – 2018 | 29 – Sep – 2018 | 1h | Oanh |
| 3.1.5 | Design user interface of login-logout | 0,5 day | 29 – Sep – 2018 | 30 – Sep – 2018 | 2h | Nghia |
| 3.1.6 | Design a Database for login-logout | 0,5 day | 29 – Sep – 2018 | 30 – Sep – 2018 | 2h | Nghia |
| 3.1.7 | Design Test Case for Login-Logout | 0,25 day | 30 – Sep – 2018 | 1– Oct – 2018 | 1h | Truc |
| 3.1.8 | Code front-end for Login-logout | 1,25 days | 30 – Oct – 2018 | 2 – Oct – 2018 | 5h | Truong |
| 3.1.9 | Code back-end for Login-logout | 0,25 day | 2 – Oct – 2018 | 3 – Oct – 2018 | 1h | Truong |
| 3.1.10 | Test for Login-Logout | 0,25 day | 2 – Oct – 2018 | 3 – Oct – 2018 | 1h | Truc |
| 3.1.11 | Design user interface of remember password | 0,25 day | 3 – Oct – 2018 | 4 – Oct – 2018 | 1h | Nghia |
| 3.1.12 | Design a Database for remember password | 0,5 day | 3 – Oct – 2018 | 4 – Oct – 2018 | 2h | Truong |
| 3.1.13 | Design Test Case for remember password | 0,25 day | 3 – Oct – 2018 | 4 – Oct – 2018 | 1h | Oanh |
| 3.1.14 | Code front-end for remember password | 0,5 day | 4 – Oct – 2018 | 5 – Oct – 2018 | 2h | Nghia |
| 3.1.15 | Code back-end for remember password | 0,25 day | 4 – Oct – 2018 | 5 – Oct – 2018 | 1h | Truong |
| 3.1.16 | Test for remember password | 0,25 day | 4 – Oct – 2018 | 5 – Oct – 2018 | 1h | Oanh |
| 3.1.17 | Design user interface of chat form (explainer) | 0,5 day | 5 – Oct – 2018 | 6 – Oct – 2018 | 2h | Truong |
| 3.1.18 | Design Test Case for Chat form (explainer) | 1,75 days | 5 – Oct – 2018 | 8 – Oct – 2018 | 7h | Truc |
| 3.1.19 | Code front-end for Chat form | 1,25 days | 8– Oct – 2018 | 9 – Oct – 2018 | 5h | Nghia |
| 3.1.20 | Code back-end for Chat form | 0,25 day | 9 – Oct – 2018 | 10 – Oct – 2018 | 1h | Nghia |
| 3.1.21 | Test for Chat Form | 0,25 day | 9 – Oct – 2018 | 10 – Oct – 2018 | 1h | Truc |
| 3.1.22 | Design user interface waiting page(waiting to connect with other player) | 0,75 day | 9 – Oct – 2018 | 10 – Oct – 2018 | 3h | Truong |
| 3.1.23 | Design a Database for waiting page(waiting to connect with other player) | 1 day | 10 – Oct – 2018 | 11 – Oct – 2018 | 4h | Nghia |
| 3.1.24 | Design Test Case for waiting page | 0,5 day | 11– Oct – 2018 | 12 – Oct – 2018 | 2h | Oanh |
| 3.1.25 | Code front-end for waiting page | 3,75 days | 12 – Oct – 2018 | 14– Oct – 2018 | 15h | Truong |
| 3.1.26 | Code back-end for waiting page | 0,25 day | 14 – Oct – 2018 | 15– Oct – 2018 | 1h | Nghia |
| 3.1.27 | Test for Waiting page | 0,25 day | 14 – Oct – 2018 | 15 – Oct – 2018 | 1h | Oanh |
| 3.1.28 | Design user interface of play time | 0,25 day | 14 – Oct – 2018 | 15 – Oct – 2018 | 1h | Nghia |
| 3.1.29 | Design Test Case for playtime | 0,5 day | 15 – Oct – 2018 | 16 – Oct – 2018 | 2h | Truc |
| 3.1.30 | Code front-end for playtime | 0,25 day | 15 – Oct – 2018 | 16 – Oct – 2018 | 1h | Truong |
| 3.1.31 | Code back-end for playtime | 0,25 days | 15 – Oct – 2018 | 16 – Oct – 2018 | 1h | Nghia |
| 3.1.32 | Test for Playtime | 0,25 day | 15 – Oct – 2018 | 16 – Oct – 2018 | 1h | Truc |
| 3.1.33 | **Implement Test Case** | 0,25 day | 16 – Oct – 2018 | 17 – Oct – 2018 | 1h | Team |
| 3.1.34 | **Fix bugs and Report** | 0,25 day | 16 – Oct – 2018 | 17 – Oct – 2018 | 1h | Team |
| 3.1.35 | **Retest** | 0,25 day | 16 – Oct – 2018 | 17 – Oct – 2018 | 1h | Team |
| 3.1.36 | **Closing** | 0,25 day | 16 – Oct – 2018 | 17 – Oct – 2018 | 1h | Team |
| ***3.2*** | **Sprint 2** | 20 days | 20 – Oct – 2018 | 8 – Nov – 2018 | 76h | *Team* |
| 3.2.1 | Code back-end for Login-logout | 1day | 20 – Oct – 2018 | 21 – Oct – 2018 | 4h | Nghia |
| 3.2.2 | Test for Login-logout | 0,125day | 21 – Oct – 2018 | 22 – Oct – 2018 | 0,5h | Oanh |
| 3.2.3 | Code front-end for Chat form | 1day | 22 – Oct – 2018 | 23 – Oct – 2018 | 4h | Nghia |
| 3.2.4 | Code back-end for Chat form | 1,25 days | 23 – Oct – 2018 | 24 – Oct – 2018 | 5h | Truong |
| 3.2.5 | Test for chat form | 0,125day | 24 – Oct – 2018 | 25 – Oct – 2018 | 0,5h | Oanh |
| 3.2.6 | Design a Database for waiting page(waiting to connect with other player) | 0,25 day | 24 – Oct – 2018 | 25 – Oct – 2018 | 1h | Truong |
| 3.2.7 | Code back-end for waiting page | 1,75 days | 25 – Oct – 2018 | 27 – Oct – 2018 | 7h | Nghia |
| 3.2.8 | Test for waiting page | 0,125day | 27 – Oct – 2018 | 28 – Oct – 2018 | 0,5h | Oanh |
| 3.2.9 | Design user interface of play time | 0,125day | 27 – Oct – 2018 | 28 – Oct – 2018 | 0,5h | Truong |
| 3.2.10 | Code front-end for playtime | 0,25 day | 27 – Oct – 2018 | 28 – Oct – 2018 | 1h | Nghia |
| 3.2.11 | Code back-end for playtime | 0,25 day | 27 – Oct – 2018 | 28 – Oct – 2018 | 1h | Truong |
| 3.2.12 | Test for playtime | 0,125day | 28 – Oct – 2018 | 29 – Oct – 2018 | 0,5h | Oanh |
| 3.2.13 | Design user interface of words to explain | 0,125day | 28 – Oct – 2018 | 29 – Oct – 2018 | 0,5h | Truong |
| 3.2.14 | Design a Database for Choose words to explain | 0,75 day | 28 – Oct – 2018 | 29 – Oct – 2018 | 3h | Nghia |
| 3.2.15 | Design Test Case for Choose word explain | 0,5 day | 29 – Oct – 2018 | 30 – Oct – 2018 | 2h | Truc |
| 3.2.16 | Code front-end of choose words to explain | 0,75 day | 29 – Oct – 2018 | 30 – Oct – 2018 | 3h | Nghia |
| 3.2.17 | Code back-end of choose words to explain | 0,125day | 30 – Oct – 2018 | 31 – Oct – 2018 | 0,5h | Truong |
| 3.2.18 | Test for Choose word explain | 0,125day | 30 – Oct – 2018 | 31 – Oct – 2018 | 0,5h | Truc |
| 3.2.19 | Design user interface of change words story | 0,25 day | 30 – Oct – 2018 | 31 – Oct – 2018 | 1h | Nghia |
| 3.2.20 | Design Test Case for change word | 0,5 day | 30 – Oct – 2018 | 31 – Oct – 2018 | 2h | Truc |
| 3.2.21 | Code front-end of Change words | 1day | 31 – Nov – 2018 | 1 – Nov – 2018 | 4h | Truong |
| 3.2.22 | Code back-end of Change words | 0,125day | 1 – Nov – 2018 | 2 – Nov – 2018 | 0,5h | Nghia |
| 3.2.23 | Test for change words | 0,125day | 1 – Nov – 2018 | 2 – Nov – 2018 | 0,5h | Truc |
| 3.2.24 | Design user interface of type of vocabulary | 0,25 day | 1 – Nov – 2018 | 2 – Nov – 2018 | 1h | Truong |
| 3.2.25 | Design a Database for Type of vocabulary | 0,5 day | 1 – Nov – 2018 | 2 – Nov – 2018 | 2h | Nghia |
| 3.2.26 | Design Test Case for Type of vocabulary | 0,5 day | 2 – Nov – 2018 | 3 – Nov – 2018 | 2h | Truc |
| 3.2.27 | Code front-end of Type of vocabulary | 1,25 days | 2 – Nov – 2018 | 3 – Nov – 2018 | 5h | Truong |
| 3.2.28 | Code back-end of Type of vocabulary | 0,125day | 3 – Nov – 2018 | 4 – Nov – 2018 | 0,5h | Truong |
| 3.2.29 | Test for Type of vocabulary | 0,125day | 3 – Nov – 2018 | 4 – Nov – 2018 | 0,5h | Truc |
| 3.2.30 | Design user interface of Suggest character of words | 0,25 day | 3 – Nov – 2018 | 4 – Nov – 2018 | 1h | Nghia |
| 3.2.31 | Design a Database for Suggest character of words | 0,25 day | 3 – Nov – 2018 | 4 – Nov – 2018 | 1h | Nghia |
| 3.2.32 | Design Test Case for Suggest character of words | 0,5 day | 4 – Nov – 2018 | 5 – Nov – 2018 | 2h | Oanh |
| 3.2.33 | Code front-end of Suggest character of words | 0,5 day | 4 – Nov – 2018 | 5 – Nov – 2018 | 2h | Nghia |
| 3.2.34 | Code back-end of Suggest character of words | 0,125 day | 4 – Nov – 2018 | 5 – Nov – 2018 | 0,5h | Nghia |
| 3.2.35 | Test for Suggest character of words | 0,125day | 5 – Nov – 2018 | 6 – Nov – 2018 | 0,5h | Oanh |
| 3.2.36 | Design user interface point | 0,125day | 5 – Nov – 2018 | 6 – Nov – 2018 | 0,5h | Truong |
| 3.2.37 | Design a Database for Point | 0,25 day | 5 – Nov – 2018 | 6 – Nov – 2018 | 1h | Truong |
| 3.2.38 | Design Test Case for point | 0,5 day | 5 – Nov – 2018 | 6 – Nov – 2018 | 2h | Oanh |
| 3.2.39 | Code front-end of Point | 1day | 6 – Nov – 2018 | 7 – Nov – 2018 | 4h | Nghia |
| 3.2.40 | Code back-end of Point | 0,125day | 6 – Nov – 2018 | 7 – Nov – 2018 | 0,5h | Nghia |
| 3.2.41 | Test for point | 0,125day | 6 – Nov – 2018 | 7 – Nov – 2018 | 0,5h | Oanh |
| 3.2.42 | Design user interface notification answer correct | 0,125day | 6 – Nov – 2018 | 7 – Nov – 2018 | 0,5h | Truong |
| 3.2.43 | Design Test Case for notification answer correct | 0,25 day | 6 – Nov – 2018 | 7 – Nov – 2018 | 1h | Truc |
| 3.2.44 | Code front-end of notification answer correct | 1day | 7 – Nov – 2018 | 8– Nov – 2018 | 4h | Nghia |
| 3.2.45 | Code back-end of notification answer correct | 0,125day | 7 – Nov – 2018 | 8– Nov – 2018 | 0,5h | Truc |
| 3.2.46 | Test for notification answer correct | 0,125day | 7 – Nov – 2018 | 8– Nov – 2018 | 0,5h | Nghia |
| ***3.3*** | **Sprint 3** | 28 days | 3 – Nov – 2018 | 1 – Dec – 2018 | **136h** | *team* |
| 3.3.1 | Code back-end for Login facebook | 0,8 day | 3 – Nov – 2018 | 4 – Nov – 2018 | 4h | Truong |
| 3.3.2 | Middleware checking status acccount | 0,6 day | 4 – Nov – 2018 | 5– Nov – 2018 | 3h | Truong |
| 3.3.3 | Save profile of user in database | 0,6 day | 5 – Nov – 2018 | 6 – Nov – 2018 | 3h | Truong |
| 3.3.4 | Design test case for Login | 0,2 day | 6– Nov – 2018 | 7 – Nov – 2018 | 1h | Oanh |
| 3.3.5 | Test for Login | 0,2 day | 6 – Nov – 2018 | 7 – Nov – 2018 | 1h | Oanh |
| 3.3.6 | Code back-end for Logout facebook | 0,4 day | 6 – Nov – 2018 | 7 – Nov – 2018 | 2h | Truong |
| 3.3.7 | Design test case for Logout | 0,2 day | 6 – Nov – 2018 | 7 – Nov – 2018 | 1h | Truc |
| 3.3.8 | Test for Logout | 0,2 day | 7– Nov – 2018 | 8 – Nov – 2018 | 1h | Truc |
| 3.3.9 | Code back-end connect 4 players in room game | 1,6 days | 7 – Nov – 2018 | 9 – Nov – 2018 | 8h | Nghia |
| 3.3.10 | Code back-end time waiting | 0,6 day | 9 – Nov – 2018 | 10 – Nov – 2018 | 3h | Nghia |
| 3.3.11 | Devide 4 players in two team | 1,6 days | 9 – Nov – 2018 | 11 – Nov – 2018 | 8h | Nghia |
| 3.3.12 | Devide role for each players | 3 days | 11 – Nov – 2018 | 13 – Nov – 2018 | 15h | Nghia |
| 3.3.13 | Design test case for Play game | 0,2 day | 13 – Nov – 2018 | 14 – Nov – 2018 | 1h | Truc |
| 3.3.14 | Test for play game | 0,2 day | 13 – Nov – 2018 | 14 – Nov – 2018 | 1h | Truc |
| 3.3.15 | Render name of 4 Players | 0,6 day | 13 – Nov – 2018 | 14 – Nov – 2018 | 3h | Truong |
| 3.3.16 | Code front-end display words | 0,8 day | 14 – Nov – 2018 | 15 – Nov – 2018 | 4h | Truong |
| 3.3.17 | Render suggest for players | 1,4 days | 15 – Nov – 2018 | 16 – Nov – 2018 | 7h | Truong |
| 3.3.18 | Code back-end sugest words | 0,8 day | 16 – Nov – 2018 | 17 – Nov – 2018 | 4h | Truong |
| 3.3.19 | Design test case for view game informarion | 0,2 day | 17 – Nov – 2018 | 18 – Nov – 2018 | 1h | Oanh |
| 3.3.20 | Test for view game information | 0,9 day | 17 – Nov – 2018 | 18 – Nov – 2018 | 1h | Oanh |
| 3.3.21 | Count scores for players have correct answer | 1,8 days | 17 – Nov – 2018 | 19 – Nov – 2018 | 9h | Nghia |
| 3.3.22 | Function check input with keyword | 0,8 day | 19 – Nov – 2018 | 20 – Nov – 2018 | 4h | Nghia |
| 3.3.23 | Code back end calculate scores | 0,6 day | 19 – Nov – 2018 | 20 – Nov – 2018 | 3h | Nghia |
| 3.3.24 | Render result for 4 player | 0,6 day | 20– Nov – 2018 | 21 – Nov – 2018 | 3h | Nghia |
| 3.3.25 | Design test case for view result | 0,2 day | 21 – Nov – 2018 | 22 – Nov – 2018 | 1h | Oanh |
| 3.3.26 | Test for view result | 0,2 day | 21 – Nov – 2018 | 22 – Nov – 2018 | 1h | Oanh |
| 3.3.27 | Function get random keyword | 0,4 day | 21 – Nov – 2018 | 22 – Nov – 2018 | 2h | Nghia |
| 3.3.28 | Render keyword from database to player | 0,4 day | 22 – Nov – 2018 | 23 – Nov – 2018 | 2h | Nghia |
| 3.3.29 | Send data keyword is choosing to all player in room | 0,8 day | 23 – Nov – 2018 | 24 – Nov – 2018 | 4h | Nghia |
| 3.3.30 | Design test case for select keyword | 0,2day | 24 – Nov – 2018 | 25 – Nov – 2018 | 1h | Oanh |
| 3.3.31 | Test for select keyword | 0,2day | 24 – Nov – 2018 | 25 – Nov – 2018 | 1h | Oanh |
| 3.3.32 | Code back-end Chat from client to server | 0,8 day | 24 – Nov – 2018 | 25 – Nov – 2018 | 4h | Oanh |
| 3.3.33 | Code back-end Chat from server to client | 1 day | 24 – Nov – 2018 | 25 – Nov – 2018 | 5h | Oanh |
| 3.3.34 | Design test case for explain word | 0,2 day | 25 – Nov – 2018 | 26 – Nov – 2018 | 1h | Truc |
| 3.3.53 | Test for explain word | 0,2 day | 25 – Nov – 2018 | 26 – Nov – 2018 | 1h | Truc |
| 3.3.36 | Render message to client |  | 25– Nov – 2018 | 26 – Nov – 2018 | 3h | Truc |
| 3.3.37 | Render system message | 0,8 day | 26 – Nov – 2018 | 27 – Nov – 2018 | 4h | Truc |
| 3.3.38 | Render name with message | 0,8 day | 27 – Nov – 2018 | 28 – Nov – 2018 | 4h | Truc |
| 3.3.39 | Get username from cookies | 1 day | 28 – Nov – 2018 | 29 – Nov – 2018 | 5h | Truc |
| 3.3.40 | Design test case for answer | 0,2 day | 29 – Nov – 2018 | 30 – Nov – 2018 | 1h | Oanh |
| 3.3.41 | Test for answer | 0,2 day | 29 – Nov – 2018 | 30 – Nov – 2018 | 1h | Oanh |
| 3.3.42 | **Implement Test Case** | 0,2 day | 30 – Nov – 2018 | 1 – Dec – 2018 | 1h | Team |
| 3.3.43 | **Fix bugs and Report** | 0,2 day | 30 – Nov – 2018 | 1 – Dec – 2018 | 1h | Team |
| 3.3.44 | **Retest** | 0,2 day | 30 – Nov – 2018 | 1 – Dec – 2018 | 1h | Team |
| 3.3.45 | **Closing** | 0,2 day | 30 – Nov – 2018 | 1 – Dec – 2018 | 1h | Team |
| **4** | **Project Meeting** | **2 days** | **2– Dec – 2018** | **4 –Dec - 2018** | **6h** | **Team** |
| **5** | **Final release** | **1 day** | **5-Dec - 2018** | **5-Dec-2018** | **4h** | **Team** |

1. **Development Process**
   1. **Principle and Different Stages**

The SCRUM methodology relies on the incremental development of a software application while maintaining a completely transparent list of upgrade or correction demands to be implemented (backlog). It involves frequent deliveries, usually every four weeks, and the client receives a perfectly operational application that includes more and more features every time. This is why the method relies on iterative developments at a constant rhythm of 2-4 weeks. Upgrades can therefore be more easily integrated than when using a V-cycle.

*This method requires four types of meetings*:

* Daily meetings: the entire team meets for approximately 15 minutes every day in order to answer the following three questions, usually while standing:
* *What did I do yesterday?*
* *What am I going to do today?*
* *Is there a cumbersome impediment today?*
* Planning meetings: the entire team gathers to decide on the features that will make up the following sprint
* Work review meetings: during this meeting, every member presents what he has done during the sprint. They organize a detraction of the new features or a presentation of the architecture. This is an informal meeting lasting for approximately 2 hours which is attended by the entire team.
* Retrospective meetings: at the end of each sprint, the team analyzes both successful and unsuccessful elements of their activity. During this meeting lasting between 15 and 30 minutes where everyone is invited and speaks on their own behalf, a vote of confidence is organized in order to decide on the improvements to be made.

The advantage of this method consists in reducing the documentation to the minimum in order to gain in productivity. The idea is to write only the minimum documentation which allows to save the history of the decisions taken on the project and to easily perform interventions on the software when it goes into the maintenance phase.



***Figure 03: Stages in Scrum***

* 1. **Agile - Scrum Organization**



***Figure 04: Scrum team members***

The SCRUM methodology involves the following three main players:

* *Product owner*: In most projects, the product owner is the leader of the client's project team. He is the one who will define and prioritize the product features and choose the date and content of each sprint based on values (workloads) that the team communicates to him
* *Scrum Master*: He is a genuine facilitator on the project as he makes sure that everyone works at their full potential by eliminating impediments and protecting the team from exterior interferences. Moreover, he pays particular attention to the respect of the different SCRUM phases.
* *Team*: a team is typically made up of 4-10 people and groups together all the IT specialists who are necessary on a project, i.e. an architect, a designer, a developer, a tester etc. The team is self-organizing and remains unchanged during an entire sprint.
  1. **Agile - Scrum Advantages**

Scrum differs from other development methods through its advantages which turn it into a pragmatic response to product owners' current needs:

* *Iterative and incremental method*: this allows avoiding the "tunnel effect", i.e. the fact of seeing the result only at the final delivery, and nothing or almost nothing during the entire development phase, which is so frequent with V-cycle developments.
* *Maximum adaptability for product and application development*: the sequential composition of the sprint content allows adding a modification or a feature which was not initially planned. This is precisely what renders this method "agile".
* *Participatory method*: every team member is asked to express his opinions and can contribute to all the decisions taken on the project. He is therefore more involved and motivated.
* *Enhancing communication*: by working in the same development room or being connected through different communication means, the team can easily communicate and exchange opinions on the impediments in order to eliminate them as early as possible.
* *Maximizing cooperation*: daily communication between the client and the team enables them to collaborate more closely.
* *Increasing productivity*: as it removes certain "constraints" of the classical methods, such as documentation or exaggerated formalization, SCRUM allows increasing team productivity. By adding to this the qualification of each module which allows determining estimation, everyone can compare their performance to the average team productivity.

1. **Estimation Cost**
   1. **Resources**

|  |  |  |
| --- | --- | --- |
| Full Name | Role | Salary Rate (USD/hour) |
| Tran Nguyen Huu Nghia | Scrum Master | 1 |
| Doan Nu Thuc Oanh | Team Member | 1 |
| Dinh Tran Anh Truc | Team Member | 1 |
| Do Van Truong | Team Member | 1 |

* 1. **Cost Effort Estimation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Criteria** | **Price (USD)** | **Amount** | **Total (USD)** |
| 1 | Working hour | 1 | 105\*4\*2 | 840 |
| 2 | Other support (Gas, lunch, PC,..) | 1 | 150\*4 | 600 |
|  | | |  | **Total**  1440 |

1. **Communication, Tack and Report Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of Communication** | **Communication on Schedule** | **Communication Ways** | **Who Initiates** | **Recipient** | **Notes** |
| **Status Report** | Every day | Face to face | Thang | Team |  |
| **Schedule and Effort Tracking Report** | Daily | * Face to face * Email * Group on Facebook * Share folder in Dropbox | Team | Team |  |
| **Review** | Daily | * Face to face * Meeting with mentor | Thang | Team,  Mentor |  |
| **Issue** | Any time | * Face to face * Email * Group on Facebook * Meeting with Mentor | Team | Team,  Mentor |  |

1. **Project’s Risk**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ID** | **Identify Risk** | **Descriptions** | **Probability** | **Impact** | **Priority** | **Mitigations** |
| 1 | Scope definition | Scope changes may arise during project. Redundant scope may be discovered. | 50% | 4 | 2 | Analysis and evaluate scope. |
| 2 | Requirements definition | Internal inconsistencies may exist within requirements may be missing from formal requirement specification. | 30% | 4 | 1.2 | Unifying requirements before proceeding analysis. |
| 3 | Resources | Key resources may be unavailable when required. Specific skills may not be available when required. | 30% | 2 | 0.6 | Training |
| 4 | Communication | The mentor’s requirement may be misunderstood. Project reporting needs may change during project. | 40% | 3 | 1.2 | Having analyzed the requirement, mentor should review to ensure that requirements are not misunderstood. |
| 5 | Health | Health may change during the project. An accident or incident may occur delaying the project. | 30% | 3 | 1.2 | The project plan has backup time to ensure that if there are any health risks, they will not interrupt the project. |
| 6 | Time | Project may be not finish on time. | 30% | 4 | 1.2 | Overtime to finish. |
| 7 | Estimate | Size estimate may be low. | 60% | 4 | 2.4 |  |

|  |  |
| --- | --- |
| **Impact** | |
| **1** | Low |
| **2** | Medium |
| **3** | High |
| **4** | Very High |

1. **Methods, Tool and Techniques**

* *Design, planning tools:*
  + Draw.io
  + Project planner
* *Tracking, report tools:*
  + Email, Group on Facebook
  + Share Folder on Dropbox
  + Sprint backlog
* *Programming Language:*
  + C# programing language
* *Process*: Scrum Process.

1. **Deliverables**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Document** | **Deadline** | **File Name** |
| 1 | Proposal Document | 10 – Sep – 2017 | FSR\_Proposal\_Ver1.i.docx |
| 2 | User Story Document | 13 – Sep – 1017 | FSR\_UserStory\_Ver1.i.docx |
| 3 | Product Backlog Document | 15 – Sep – 2017 | FSR\_ProductBacklog\_Ver1.i.docx |
| 4 | Project Plan Document | 20 – Sep – 2017 | FSR\_ProjectPlan\_Ver1.i.docx |
| 5 | Architecture Design Document | 24 – Sep – 2017 | FSR\_ArchitectureDesign\_Ver1.i.docx |
| 6 | Sprint Backlog Document | 26 – Sep – 2017 | FSR\_SprintBacklog\_Sprint-i.xlsx |
| 7 | User Interface Document | 29 – Sep – 2017 | FSR\_UserInterface\_Ver1.i.docx |
| 8 | Database Design Document | 4 – Oct – 2017 | FSR\_DatabaseDesign\_Ver1.i.docx |
| 9 | Test Plan Document | 6 – Oct – 2017 | FSR\_TestPlan\_Sprint-i\_Ver1.i.xlsx |
| 10 | Test Case Document | 8 – Oct – 2017 | FSR\_TestCase\_Sprint-i\_Ver1.i.docx |