**Individual Release Planning**

**Assignment for Course PA2521**

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**A. Product Description**

The product is a course management system, it is very similar like the online system we are using named “Itslearning”. It is aim at serving Swedish university students, teachers and administrators. It will satisfy the learning and teaching requirements. And it provides an efficient way for communication between different users. This project is composed of 208 user requirements. Moreover, these requirements are made by different types of users. For example, there are some requirements come from teacher groups, some requirements come from student groups, and some requirements come from developer groups and so on. Because the project was developed in Sweden, so the main audience for our product is Swedish university. Our product is a multifunctional Web-platform software product. It includes most of functions that ItsLearning platform has, and we will add more futures and improve it as soon as possible.

**B. Company Size**

1. The company size is small. There are 20 members in our company: 16 developers, 2 testers and 1 customer and 1 manager.

2. We will use two agile development teams for this project. Each team includes 8 members. They are 7 developers and 1 tester.

3. Our development will adopt agile development model. Include five basic development process, they are analyze, design, develop, test and document.

4. The two agile teams will work together, and we plan to use 18 months to accomplish our project.

**C. Roadmap**

In this part, I will introduce the roadmap of this product and the different viewpoints.

**1. Viewpoints of different stakeholders**

From the discussion forum on itslearning, I found there are six different kinds of stakeholders in our product. They are: 1. Teacher 2. Teacher assistant 3. Administrator 4. New student 5. Old engineer student 6. Developer

The viewpoints from these six different stakeholders will be shown in next table.

|  |  |
| --- | --- |
| Stakeholder Name | Viewpoints |
| Teacher | Uploading the relevant file  Collecting student’s assignment  Evaluating by giving feedback and grade  Communicate with students and teacher assistant online |
| Teacher assistant | Uploading and downloading relevant files  Evaluating by giving feedback and grade  Communicate with student and teachers online |
| Administrator | Modify student information  Grade and credit management  Notification  Communicate with students online |
| New student | New student activation  Edit for own account  Course registration  View Course schedule  View our course information  Communication with teacher, other students |
| Old engineer student | Course registration  Email alert  Communication with teacher, other students  Assistant and student administrator  Edit for own account |
| Developer | Database to store the data  High compatibility to run in different environment  High Security for personal information  Authority management |

**2. Roadmap with releases**

In order to complete the online system on time, we will use a feature-based product roadmap. There will be four stages in the futures of this product. Also, there will be four releases map to our roadmap. We will present the roadmap with release in table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Release1 | Release2 | Release3 | Release4 |
| Date | Jan.2017-Mar.2017 | Apr.2017-Sep.2017 | Sep.2017-Mar.2018 | Apr.2018-Jun.2018 |
| During Time | 3 months | 6 months | 6 months | 3 months |

Goal

1. Implement a product which contains basic functions. Build an executable product as soon as possible.

2. Implement a system contains. The basic functions of the system are more convenient and quick to use.

3. Make the system editable, Implement the preferred function requirements，and improve user satisfaction with the use.

4. The product is mainly complete, we can add extra requirements and improvement of the whole system

Feature/theme.

Source Two agile development team include 16 members

Viewpoints

1. Old Engineer Student, Teacher, New Student, Teacher Assistant

2. Old Engineer Student, Teacher, New Student, Teacher Assistant, Student Administrator

3. Old Engineer Student, Teacher, New Student, Teacher Assistant, Student Administrator

4. Teacher, Students, Developers.

Metrics

1. The number of buttons and frame. The number of sub-page. The speed of searching. The response time of accessing the interface.

2. The speed of sending and receiving message. The speed of uploading and downloading. The feasibility of registration, log in and log out.

3. Some little functions performance. Editable and delectable of the file or documentation.

4. Assess the final release product by all the requirements. The number of requirements finished additionally.

**D. Release planning strategy**

**Release Planning Method:**

The release planning method that I would like to use is Theme-based release planning. This method is product management methodologies that focus on to create more value for the project in the release planning aspect. In the early stages of release plan development, all the stakeholders will be considered in dividing clustering features, feature prioritization which can help to promote agile development method. This method aims at offering features in a particular release with considering of their cohesiveness.

**Motivation:**

1. I have already summarized and listed the requirements and understand what features of the product should have, the theme-based method provides an effective way to assign features in different releases.

2. Our product constants of a lot of features, and the features in this system are highly dependent on each other, Theme-based product release planning is a feature-oriented method, and my roadmap is feature-oriented too, so they can map each other well in some aspect.

3. Theme-based product release planning is suitable for some small and simple system, and this method is easy to learn and use. Our project include 208 requirements, so it is not a big project, the Theme-based product release planning is suitable for our project.

**Prioritization Method**

The method I use for requirements prioritization is MosCow. MoSCOW is a prioritization method that can give a hierarchical order of preference for groups of requirements. It is aim at delivering the best and faster business benefits for the project. There are four hierarchical priority groups in the method of MosCow. They are Must have, Should have, Could have and Won't have.

Must have:

Requirements labeled as must have had the highest priority. The requirements in Must have are very critical to the product and project plan.

Should have:

The requirements in Should have are important as well as the Must have, it would be nice if achieve it.

Could have:

The requirements in Could have are not very necessary in the requirements database, but the implementation of these requirements can improve the user satisfaction and improve the quality of product.

Won’t have:

The requirements in Won't have are least-critical items in the requirements database. The requirements are not necessary at this time and they will not be implemented in the products.

**Motivation:**

1. It is quick and easy to perform.

2. MoScoW method is an ordinal level technique, it is easy to learn.

3. There are different stakeholders in our product, using the MosCow method to divide the requirements into different groups are important.

**E. Execution of Release Planning**

As we know that, our project includes 208 requirements. And these requirements are from different stakeholders. Many of them belong to same types. For example, #19-User interface language requirement and #40-Personal start page contents are all belong to user interface requirements.

So, at first, I will download all the 208 requirements and saved them in an excel table. Then I will divide them into 11 different types. At last, I will use MoSCOW to detail analyze the requirements.

The 11 different types of requirements are:

1. User interface

2. Search function

3. View function

4. Upload and download

5. User register function

6. Login and logout

7. Communication function

8. Notification

9. Edit and delete

10. Evaluation

11. Other function (include non-function)

As we know that, the MoSCOW method will decide the requirements into 4 levels. They

M (must), S (should), C (could), W (won’t). I will use ✅ to mark my choice.

Requirements type：

1. User interface

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.11 | Personal Start Page | √ |  |  |  |
| No.12 | Course Start Page | √ |  |  |  |
| No.21 | Course Start Page | √ |  |  |  |
| No.39 | Course Start Page Contents | √ |  |  |  |
| No.40 | Personal Start Page Contents | √ |  |  |  |
| No.145 | User Interface | √ |  |  |  |
| No.164 | Layout customization support | √ |  |  |  |
| No.23 | Discussion Forum |  | √ |  |  |
| No.64 | Link to Course |  | √ |  |  |
| No.66 | Calendar Item Contents |  | √ |  |  |
| No.68 | Contents of Message |  | √ |  |  |
| No.144 | Editing layout of the course page |  | √ |  |  |
| No.207 | Compatibility different resolutions |  | √ |  |  |
| No.19 | User Interface Language |  |  | √ |  |

1. Search function

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.77 | Search option | √ |  |  |  |
| No.98 | Search engine | √ |  |  |  |
| No.189 | Course Schedule | √ |  |  |  |

1. View function

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.8 | Course Information | √ |  |  |  |
| No.28 | List Courses for User | √ |  |  |  |
| No.32 | Basic Contents of Personal Profile | √ |  |  |  |
| No.34 | Access to View Social Security Number | √ |  |  |  |
| No.47 | Access to View Course Info | √ |  |  |  |
| No.49 | View Course Links | √ |  |  |  |
| No.56 | Access to View Course News | √ |  |  |  |
| No.58 | Access to use Course File Archive | √ |  |  |  |
| No.90 | New/Extra-curricular activities | √ |  |  |  |
| No.102 | Activity Log | √ |  |  |  |
| No.132 | Hand in overview | √ |  |  |  |
| No.155 | User profile Information | √ |  |  |  |
| No.159 | Student information view | √ |  |  |  |
| No.160 | Students management | √ |  |  |  |
| No.177 | Participants list | √ |  |  |  |
| No.191 | Grade checking | √ |  |  |  |
| No.4 | Limited Views |  | √ |  |  |
| No.35 | Extra Contents of Personal Profile |  | √ |  |  |
| No.51 | Discussion Forum message overview |  | √ |  |  |
| No.122 | Teacher's contact information on the course page |  | √ |  |  |
| No.143 | Reading PDF files support |  | √ |  |  |
| No.182 | Course Options |  | √ |  |  |
| No.202 | Grade and Credit Management |  | √ |  |  |
| No.195 | Login information representation |  |  | √ |  |
| No.123 | Comment section for lecture streams |  |  | √ |  |
| No.97 | Teacher timetable and meeting |  |  | √ |  |

1. Upload and download

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.15 | Course File Archive | √ |  |  |  |
| No.31 | Download files from Course File Archive | √ |  |  |  |
| No.72 | RTF files | √ |  |  |  |
| No.82 | Access to upload and download assignment | √ |  |  |  |
| No.83 | Download examination forms | √ |  |  |  |
| No.84 | Download files to desired location | √ |  |  |  |
| No.86 | Upload personal files | √ |  |  |  |
| No.129 | Hand in | √ |  |  |  |
| No.130 | Upload files | √ |  |  |  |
| No.163 | Course literature management | √ |  |  |  |
| No.166 | Uploading file | √ |  |  |  |
| No.169 | Publish Assignment | √ |  |  |  |
| No.180 | Bulletins | √ |  |  |  |
| No.184 | Download File | √ |  |  |  |
| No.185 | Course related information | √ |  |  |  |
| No.57 | Access to change in Course File Archive |  | √ |  |  |
| No.76 | Supportable formats |  | √ |  |  |
| No.118 | Resource Sharing |  | √ |  |  |
| No.148 | Hand in file size |  | √ |  |  |
| No.149 | Links to websites |  | √ |  |  |
| No.151 | Hand in options |  | √ |  |  |
| No.152 | Hand in deadline |  | √ |  |  |
| No.174 | Cannot submit after deadline |  | √ |  |  |
| No.73 | Streaming Video |  |  | √ |  |
| No.81 | Export grade with csv, xls, xlsx, pdf |  |  | √ |  |

1. User register function

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.65 | Add New Users as Course Participators | √ |  |  |  |
| No.75 | Sign Up for participants | √ |  |  |  |
| No.111 | Register for exams | √ |  |  |  |
| No.179 | Course Registration | √ |  |  |  |
| No.183 | Publish the registrations | √ |  |  |  |
| No.135 | Automatic enrollment |  | √ |  |  |
| No.192 | Outdated courses cancelling |  | √ |  |  |
| No.74 | Register option for courses |  |  | √ |  |

1. Login and logout

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.1 | Restricted Interface | √ |  |  |  |
| No.2 | Restricted Interface | √ |  |  |  |
| No.27 | Login/Logout | √ |  |  |  |
| No.61 | Incorrect login | √ |  |  |  |
| No.62 | Successful Login | √ |  |  |  |
| No.88 | Login Credentials | √ |  |  |  |
| No.63 | First login |  | √ |  |  |
| No.89 | information provided to the user on restriction |  | √ |  |  |
| No.103 | Automatic logout |  | √ |  |  |
| No.109 | Session Manager |  | √ |  |  |
| No.137 | Log in time reset |  | √ |  |  |
| No.187 | Automatically Log Out |  | √ |  |  |
| No.197 | Account automatically sign out |  | √ |  |  |
| No.104 | Enable and disable option for automatic logout |  |  | √ |  |

1. Communication function

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.67 | Reply to Message | √ |  |  |  |
| No.69 | Course Chatroom | √ |  |  |  |
| No.117 | Send Messages | √ |  |  |  |
| No.121 | Course Platform | √ |  |  |  |
| No.146 | Hand in feedback privacy | √ |  |  |  |
| No.176 | Communication | √ |  |  |  |
| No.186 | Send Message | √ |  |  |  |
| No.193 | Comments Replying | √ |  |  |  |
| No.205 | Communication(same with 176) | √ |  |  |  |
| No.199 | Relationship of developers |  | √ |  |  |
| No.131 | Chart room(same with 69) |  | √ |  |  |
| No.119 | Campus Forum |  | √ |  |  |
| No.114 | Contact information |  | √ |  |  |
| No.108 | Discussion about the assignment |  | √ |  |  |
| No.59 | Access to Discussion Forum |  | √ |  |  |

1. Notification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.87 | Notification Alerts | √ |  |  |  |
| No.112 | Auto-generated mail | √ |  |  |  |
| No.120 | Notification | √ |  |  |  |
| No.124 | Push Notifications | √ |  |  |  |
| No.188 | Email Notification | √ |  |  |  |
| No.190 | Email Alert | √ |  |  |  |
| No.196 | Receiving information | √ |  |  |  |
| No.203 | Grade Notification | √ |  |  |  |
| No.204 | Exam Notification | √ |  |  |  |
| No.181 | Latest Changes |  | √ |  |  |
| No.113 | Unread notifications for messages |  | √ |  |  |
| No.85 | User-friendly information |  |  | √ |  |

1. Edit and delete

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.5 | Manage and Conduct a Course | √ |  |  |  |
| No.14 | Course News | √ |  |  |  |
| No.16 | Personal Profile | √ |  |  |  |
| No.17 | Manage Course Participators | √ |  |  |  |
| No.24 | Product Access | √ |  |  |  |
| No.29 | CRUD course news | √ |  |  |  |
| No.30 | Add / Remove files to file archive | √ |  |  |  |
| No.33 | Edit Basic Contents of Personal Profile | √ |  |  |  |
| No.36 | Add/Remove Participators to Course | √ |  |  |  |
| No.50 | CRUD Course links | √ |  |  |  |
| No.52 | View/add messages | √ |  |  |  |
| No.53 | Access to edit user database | √ |  |  |  |
| No.54 | Edit Course News | √ |  |  |  |
| No.55 | Access to Add, Edit and Remove Course News Items | √ |  |  |  |
| No.70 | Cannot import calendar | √ |  |  |  |
| No.78 | Profile progress tracker | √ |  |  |  |
| No.134 | Enroll students | √ |  |  |  |
| No.136 | Add, delete, update function | √ |  |  |  |
| No.140 | Publish information function | √ |  |  |  |
| No.141 | Course management | √ |  |  |  |
| No.165 | Course dashboard management | √ |  |  |  |
| No.167 | Edit comment for the files uploaded | √ |  |  |  |
| No.170 | Edit comment for the assignment published | √ |  |  |  |
| No.171 | Set the deadline for the assignment published | √ |  |  |  |
| No.173 | Account Settings | √ |  |  |  |
| No.178 | Profile Management | √ |  |  |  |
| No.194 | Account and Profile Modifying | √ |  |  |  |
| No.201 | Modify Student Information | √ |  |  |  |
| No.156 | Course related events |  | √ |  |  |
| No.147 | Privacy of personal information |  | √ |  |  |
| No.138 | Course edit options |  | √ |  |  |
| No.133 | Save main users' information |  | √ |  |  |
| No.126 | Post messages |  | √ |  |  |
| No.101 | Trash Box |  | √ |  |  |
| No.99 | Language and Country |  | √ |  |  |
| No.91 | Data Backup |  | √ |  |  |
| No.80 | Access to delete the message in course discussion form |  | √ |  |  |
| No.48 | Access to Edit Course Info (syllabus) |  | √ |  |  |
| No.46 | Access to Personal Calendar |  | √ |  |  |
| No.45 | Access to Change Course Calendar |  | √ |  |  |
| No.44 | Synchronize Calendars |  | √ |  |  |
| No.43 | CRUD Calendar Items |  | √ |  |  |
| No.42 | Course Administration Contents |  | √ |  |  |
| No.25 | User Calendar |  | √ |  |  |
| No.20 | Course Calendar |  | √ |  |  |
| No.154 | User profile picture |  |  | √ |  |

1. Evaluation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.71 | Grade export not working | √ |  |  |  |
| No.96 | Course feedback | √ |  |  |  |
| No.107 | Course Assessment Record | √ |  |  |  |
| No.125 | Grading | √ |  |  |  |
| No.161 | Student evaluating (same with 125) | √ |  |  |  |
| No.175 | Evaluate the answer for assignment | √ |  |  |  |
| No.172 | Collect the files |  | √ |  |  |
| No.198 | Get feedback from customer |  | √ |  |  |

1. Other function (include non-function)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RQs number | Title | Must (M) | Should (S) | Could (C) | Won’t (W) |
| No.3 | Secure Product | √ |  |  |  |
| No.10 | Usable Product | √ |  |  |  |
| No.13 | Quick and Easy Overview of Relevant Information | √ |  |  |  |
| No.41 | Access to Course Administration | √ |  |  |  |
| No.79 | Account activity | √ |  |  |  |
| No.127 | Phone compatibility | √ |  |  |  |
| No.128 | File compatibility | √ |  |  |  |
| No.162 | Quality Requirement: Usability (same to 10) | √ |  |  |  |
| No.209 | Security (same to 3) | √ |  |  |  |
| No.6 | Market | √ |  |  |  |
| No.7 | Heterogeneous System Access | √ |  |  |  |
| No.9 | Course Participant Administration | √ |  |  |  |
| No.18 | System Users | √ |  |  |  |
| No.22 | Course Links Archive | √ |  |  |  |
| No.37 | Course Participator Roles | √ |  |  |  |
| No.38 | Participator Privileges | √ |  |  |  |
| No.60 | Change Privileges for Course Participators | √ |  |  |  |
| No.110 | Database for projects | √ |  |  |  |
| No.115 | Course Book Library | √ |  |  |  |
| No.139 | Permission setting function | √ |  |  |  |
| No.168 | New Student Activation | √ |  |  |  |
| No.208 | Authority management (same with38) | √ |  |  |  |
| No.26 | Support Unicode |  | √ |  |  |
| No.153 | Profile privacy |  | √ |  |  |
| No.94 | Literature databases |  | √ |  |  |
| No.105 | Course library |  | √ |  |  |
| No.106 | Access to edit, delete and add the books in course library |  | √ |  |  |
| No.142 | The language can be transformed |  | √ |  |  |
| No.200 | Deliverable requirements |  | √ |  |  |
| No.93 | Recovery Email validity |  |  | √ |  |
| No.92 | Recovery Email |  |  | √ |  |
| No.150 | Visual presentation of students’ progress |  |  | √ |  |
| No.157 | clear requirement document |  |  | √ |  |
| No.158 | Smart Phone application |  |  | √ |  |
| No.206 | Database established |  |  | √ |  |
| No.100 | Sentiment Analysis |  |  |  | √ |
| No.95 | Admin Functionalities |  |  |  | √ |

**F. Result of release**

After I finish the requirements prioritization, I will discuss which requirements will be scheduled in which release. In my opinion, I will put all the M (must) requirements in the first release, then put all the S (should) requirements in the second release, next, put all the C (could) requirements in the third release, at last put all the W (won’t) requirements in the last release.

And for each release I will estimate the resources required to implement the planed requirements and describe how this release match to my roadmap.

1. For the first release:

1.1 Source

We assume that one developer salary is 30,000 sek/ month, and one tester salary is 28,000 sek/ month. The hardware and equipment costs are 1000 sek/month/person. Because there are two agile teams working for this release, and each team include 7 developers and 1 tester.

The total budget is: 30000\*7\*3+28000\*1\*3+1000\*8\*3=738000.

1.2 How matches the roadmap

Our primary goal is to develop a working product as soon as possible. So in the first release, I will set up a basic system form that include user interface, viewing, searching functions. The product could work, teachers and students can use it. Then based on the roadmap, I plan the other three releases.

2. For the second release

2.1 Source

We assume that one developer salary is 30,000 sek/ month, and one tester salary is 28,000 sek/ month. The hardware and equipment costs are 1000 sek/month/person. Because there are two agile teams working for this release, and each team include 7 developers and 1 tester.

The total budget is: 30000\*7\*6+28000\*1\*6+1000\*8\*6=1476000.

2.2 How matches the roadmap

In this release, I will put almost all the basic requirements. Because this release will during six month, so we have enough time to add new futures. In this release, the upload and download files, communication, course management, view information requirements will be completed.

3. For the third release

3.1 Source

We assume that one developer salary is 30,000 sek/ month, and one tester salary is 28,000 sek/ month. The hardware and equipment costs are 1000 sek/month/person. Because there are two agile teams working for this release, and each team include 7 developers and 1 tester.

The total budget is: 30000\*7\*6+28000\*1\*6+1000\*8\*6=1476000.

3.2 How matches the roadmap

In this release, we will try our best to make the product become better. I put some requirements based on theme, such like Evaluation function, non-function requirements and so on. Because this release will also during six month, so we have enough to complete all the necessary function requirements and non-functional requirements. To ensure the quality of the software, the requirements of measuring the quality are selected and done.

4. For the last release

4.1 Source

We assume that one developer salary is 30,000 sek/ month, and one tester salary is 28,000 sek/ month. The hardware and equipment costs are 1000 sek/month/person. Because there are two agile teams working for this release, and each team include 7 developers and 1 tester.

The total budget is: 30000\*7\*3+28000\*1\*3+1000\*8\*3=738000.

4.2 How matches the roadmap

This is the last release of our project. In this release, I will add the requirements in “Should” and “Could” group in the system which makes the system have more features and functions. Because this is the last release to improve the product, I will check our product, in order to satisfied different stakeholders’ requirements.

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