|  |  |
| --- | --- |
| **Module Code** | **CN7021** |
| **Module Title** | **Advanced Software Engineering** |
| **LSBF Coursework Instructor** | **Dr Preethi Kesavan** |
| **Coursework Title** | **Live Applied Advanced Software Engineering**  **Project (3000 words)** |
| **Weighting** | 100% |
| **Handout Date** | **October 2022** |
| **Coursework Submission Date** | **December 2022** |
| **Students’ Name & Students’ ID** | |  |  | | --- | --- | | **Student Name(s)** | **Student ID Number(s)** | | RAJAKUMARAN NISHANTHI | S1030554 | | VENKATARAMAN RAMU | S1030784 | | SONG JINGJING | S1031028 | |  |  | |
| **Documents uploaded in LSBF Canvas:** | ⭘ Assignment Report  ⭘ Presentation Report  ⭘ Source Code, Scripts & Output  ⭘ Turnitin Report |
| **UEL Turnitin Submission Similarity Index %** |  |
| Text, letter  Description automatically generated | |

I. Table of Contents I

**1.Executive Summary 2**

1.1 Introduction 2

**2.Project Background2**

2.1 Purpose and Scope2

2.2 Objective and Goals2

**3.Current Systems of E-healthcare2**

II. Main Contents

**4.A Feasibility Study and Plan3**

4.1 Project Methodology adopted and rationale/justification3

4.1.1 The Scrum Agile Methodology 3

4.2 Time Plan and/or Cost Plan 3

4.2.1 Pricing Chart & Role Chart (See Annex 13.3.1 & 13.3.2) 3

4.3 Research – Arguments & justifications of E-healthcare 3

**5.Requirements Analysis and Specification** 4

* 1. Use Case Diagrams 4

5.1.1 High Level Use Case of E-healthcare 4

5.1.2 Use Case Diagram for Online Consultation and Medial Subscription System 4

5.2 Use Case Description 5

5.2.1 Use Case Description for Patient Appointment System5

5.2.2 Use Case Description for Doctor Consultation System 5

5.2.3Use Case Description for Patient Subscription System 5

5.3 Proposed System Requirements7

5.4 Functional Requirements, Non‐functional Requirements, Usability, Security Requirements (Features)7

**6.System and Program Design /Prototyping (Micro Service Architecture) 8**

6.1 Preliminary Design for E-healthcare System 8

6.2 Domain Class Diagram & Explanation for E-healthcare System 9

6.3 Class Diagram & Explanation for E-healthcare System 9

6.4 Sequence Diagram & Explanation for E-healthcare System 9

6.4.1 Sequence Diagram for Patient Appointment System4

6.4.2 Sequence Diagram for Doctor Consultation System4

6.4.3 Sequence Diagram for Patient Subscription System4

6.5 Activity Diagram for E-healthcare 4

6.5.1 Activity Diagram for Patient Appointment System 4

6.5.2 Activity Diagram for Doctor Consultation System 4

6.5.3 Activity Diagram for Patient Subscription System 4

6.5 State chart Diagram & Explanation9

6.6 Component Diagram & Explanation 9

**7.User Interface Design/ Mockups and Testing 10**

7.1 User interface mock-ups for E-healthcare System 10

7.2 Model View Controller for E-healthcare System 10

7.3 Database Design for E-healthcare System 10

**8.Test Plan, Test Example and Results 11**

8.1CFG- Control Flow Graph, Algorithm dry-run & Argument discussion 11

**9. Dependencies** **12**

9.1 Critical Discussion12

9.2 Risk Analysis 12

9.3 Online Surveys for E-healthcare 12

**10. Conclusion 13**

III. Table of Contents II

**11. Practice Implications and Future Research Development 14**

**12.References/Tutorials/Links 14**

**13.Appendices/Annex15**

13.1 Work Breakdown of the Team

13.2 Gantt Charts

13.3 Cost Benefit Analysis

ANNEX 13.3.1 Software Development Project Team’s Role

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Small** | **Medium** | **Large** | **Enterprise** |
| Project Manager | \* | \* | \* | \* |
| Business Analyst |  | \* | \* | Multiple |
| UI/UX |  | May be needed | \* | \* |
| Architect |  | May be needed | \* | \* |
| Database |  | May be needed | \* | \* |
| Developer | \* | 2+ | Multiple | Multiple |
| QA Tester | \* | \* | Multiple | Multiple |
| Total Roles | 3 | 5-8 | 6-10 | 12+ |

ANNEX 13.3.2 Proposed Pricing Chart to E-Healthcare System based upon your time/complexity table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Small** | **Medium** | **Large** | **Enterprise** |
| **Software Modification** | $3k-$10k | $20k-$50k | $80k-$150k | $100,000+ |
| **Web Development** | $10k-$30k | $20k-$60k | $60k-$150k | $80,000+ |
| **Software Integration** | $15k-$40k | $50k-$80k | $70k-$100k | $80,000+ |
| **New Software** | $25k-$60k | $50k-$100k | $100k-$250k | $125,000+ |