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DEFINITION OF THE PROBLEM

Design Plan:	Document Name: Problem Definition Document	SWD/Form No. 1
Effective Date:	Version: 1	Page No.

Problem definition of CERTIFICATE GENERATION SYSTEM Soft Application – ABC institute has many students who come to register for courses and issue certificate for the students. This work is handled by their manually where they have done time-consuming by teacher who have too much paperwork. Due to increase in the number of the courses the mapping of all the data becomes difficult. This work has done their manually in which they track data by creating separate files for each department. Therefore, The Certificate Department works for the "ABC" institute to developing the certification system for the students who have completed the course. For each student who come to study with them have to register, check and the payment for that course. For each course have one or more teachers is perform which fees structure: after registering the student's the payment form is developed here which should contains the two type of the payment one is the full payment and other is the payment in the installment . After that taking the course of the student had registered, they must take the final exam for each subject. The role of the exam center will be produce the certificate for the students. But it also verifies the status of the students like whether he/she has completed their total payment. If the payment of the students is not clear then students Certificate will not be produce. It should also check whether the students have given the all exam, if he/she has not given one exam, the certificate for the particular should not get printed instead it should generate the appropriate message to the students for that. This mean 30 days before he/she given one exam date, If the payment of the students is clear, they will be allow that student to take one exam, otherwise if he/she is not clear, they will message the students which extend the date of full payment and issue a certificate to the student if he / she pass the exam of each subject at the time when the tuition is payment. If he/she does not pass the exam of each subject, they will be organized exam date to notify the students about the retake date, if he/she exam fails, he/she must payment the next exam fee prescribed by their and retake the last times exam. If that times the exam is not successful, he/she needs to return registry and payment for this course. During the course of the student participation, he/she will be allow to reserve the results of each subject if he/she have a special case and must take pause and then continue to study for course. Here the certificate of the students should be generated. Before generate it must verify whether the payment of students is remaining or not, if the balance is due then certificate should not get produce. The section should be designed in such a way that it should contain logo and name of the institute. If the student scores in percentage from over 75 type Distinction, between 60 and 75 is type A, between 50 and 59 is type B, between 40 and 49 is type C (it should generate the performance of the students). However, the center also wishes that when he/she have issued certificate for the students. So, when he/she get a job or apply to a company. Because of the concern that students are actually granted a certificate at this institute, that company may be look up the information of her/him certificate when it was contact to institute.

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Design Plan:	Document Name: CRS	SWD/Form No. 2A
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CUSTOMER REQUIREMENT SPECIFICATION DOCUMENT

Client/ Project Undertaken: Certificate Generation System

1. List of inputs to the system

- Generate information about Certificate for the students: Logo and name of Institute.
- Details of the information student will be registry on the application (name, address, date of birth, gender).
- Details of the information payment course of the student: it should contains the two type of the payment one is the full payment and other is the payment in the installment.
- Details of the information mark of each subject.
- Details of the information teacher will be teach for the students (name, address, date of birth, gender).
- Details of the information class in which course.

2. List of outputs expected from the system

- After receive the information from student will be registry for each subject, we will edit and present in the database system
- After registering the student's the payment form is developed here which should contains the two type of the payment one is the full payment and other is the payment in the installment.
- After registering the student's the teacher form is displayed here which should contains the schedule of course.
- It should contain fields like (logo, name, course, grade (A, B or C, distinction)) will be display in Certificate for the students.
- Here students can view their payments status for the course, can check the balance remained. It should detail like (course, total fees, paid, balance).
- After testing the student's each subject. Once the marks of the students is evaluated then the entry of the marks is done in this application system. Exam Center will be enter mark for each subject then the status of the pass or fail will be display (course, mark, subjects).

3. Overview of processes involved in the system

- Check login, signup input from student, admin and teacher.
- Get class selected by the students add to schedule of the students
- Assigning the schedule to teacher valid in application system.
- Get course selected by the students add to schedule of the teachers.
- Get fees selected by course add to form bill of payment.
- Get the students selected by admin add to form issue certificate and payments status.
- Calculate the bill of payments status, check the balance remained.
- Get each subject selected by the students add to form result of exam.
- Calculate the mark of course for the students and check exam of the student.
- Get mark exam by the teachers add to form performance of the students.
- Check valid of the certificate for the students

- Check domain, reference of database.
- #### 4. Hardware and software required for implementing the project

- **Hardware Requirements:**

- a. Server:

- CPU: Intel Core i3-2130U, 2.5GHz
- RAM: 4GB or higher
- HDD: 120GB Hard Disk space or higher

- b. Client:

- CPU: Intel Core i3-2130U, 2.5GHz
- RAM: 2GB or higher
- HDD: 80GB Hard Disk space or higher

- **Software Requirements:**

- c. Server:

- Windows Server 2012 R2 (or higher).
- Microsoft SQL Server 2012 (or higher).
- JDBC, JDBC Driver, JDK.
- Netbeans IDE 8.2 (or higher)

- d. Client:

- Windows 7 (or higher)
- Microsoft SQL Server 2012 (or higher).
- JDBC, JDBC Driver, JDK.
- Netbeans IDE 8.2 (or higher)

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Design Plan:	Document Name: CRS/ Customer Acceptance Criteria	SWD/Form No. 2B
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CUSTOMER'S ACCEPTANCE CRITERIA

S. No	Customer's Acceptance Criteria
1.	Admin Login, logout check valid of form
2.	Fees structure of form course
3.	Marks entry of form subject
4.	Create, update, delete and edit a registry form for the students
5.	Design, create, update, modify, security and maintain database system
6.	Produce the certificate for the students
7.	Verifies the payments status of the students
8.	It should also check whether the students have given the all exam
9.	It should generate the appropriate message to the students for the particular should not get certificate for the students.
10.	The students will be provided with their authentication details and are assume to enter in their login form to view payments status and certificate

11.	Here students can view their payments status for the course, can check balance remained.
12.	Here the students result is to be displayed
13.	Valid of certificate for the students
14.	Database should back up, update regularly.

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Design Plan:	Document Name: Project Plan	SWD/Form No. 3
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PROJECT PLAN

1. Project Details

➤ **Name of the Client:** *Certificate Generation System*

➤ **Date of Project Plan:** **October 9th, 2019**

➤ **Project Vision/ Objectives:**

(Define the project vision/ objectives as stated by the client)

Project Vision: *The Certificate Department works for the "ABC" institute to developing the certification system for the students who have completed the course.*

Project Objectives:

- The solutions to overcome difficult problem of current. They need to increase the efficiency and accuracy.
- Talking pressure off staff who have too much paperwork.
- Ensuring better communication between staff and Certificate department.
- Reducing boring and repetitive task.
- Help to increase in the number of the courses.

➤ **Scope:**

(Mention the scope of the project giving the locations that will be covered, processes, range of services, and so on.)

➤ **Our understanding of the client organization:**

(Give the range of services, functions, overview of processes, and so on.)

➤ **Project Organization with Responsibilities and Authorities:**

(Give the name of Project team members their roles and responsibilities.)

2. Project Initiation/ Requirement Documents

(Information required from the Client as inputs regarding his system; could be the information about his services, processes.)

3. Deliverables

(The documents to be handed over to the client – like CRS, Design Document, Installation Manual, User Manual, Maintenance Manual, and Code documents.)

4. Project Dependencies

(Any event or task outside the scope of the project, which will affect the success of the project.)

5. Major Project Milestones

(Generating CRS, Building a Prototype.)

6. Quality Plan

- **Review Activities** (Review meeting participants, frequency)
- **Testing Activities** (Final Test)
- **Backup and recovery strategies** (in case of disk crash, network failures)

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Design Plan:	Document Name: GUI Standards Document	SWD/Form No. 4
Effective Date:	Version: 1	Page No.

DOCUMENT DESIGN

PROPERTY	VALUE
Document theme and color scheme	
Form-Background color	
Title-Font Size	
Title-Font Color	
Title-Font Style	Times New Roman
Title-Alignment	
Background color of Controls on the form	
Foreground color of Controls on the form	
Control Caption – Font Size	
Control Caption – Font Color	
Control Caption – Font Style	Times New Roman
Control caption and controls-Alignment	

Command button-Alignment

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Design Plan:	Document Name: Interface Design Document	SWD/Form No. 5
Effective Date:	Version: 1	Page No.

INTERFACE DESIGN DOCUMENT

1. List of form to be created

Document Name	Description	Controls on the Document

	Prepared By (Student)	Approved By (Teacher)
Date		

Design Plan:	Document Name:	SWD/Form No.
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CODING STANDARDS DOCUMENT

	Prepared By (Student)	Approved By (Teacher)
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Design Plan:	Document Name: Table Design Document	SWD/Form No. 6
Effective Date:	Version: 1	Page No.

PROCESS DESCRIPTION DOCUMENT

1. ER Diagram
2. Entity and Properties
3. Database Relationship Diagram
4. Database Structure

Name of the Table	Table Description	Number of Fields	Primary Key	Related Tables	Foreign Key

5. Algorithms and data structures

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Design Plan:	Document Name: Process Description Document	SWD/Form No. 7
Effective Date:	Version: 1	Page No.

PROCESS DESCRIPTION DOCUMENT

1. Process Name
2. Process Description and Details

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Design Plan:	Document Name: Coding Standards Document	SWD/Form No. 8
Effective Date:	Version: 1	Page No.

1. Programming Standards
2. Standards for code writing style
3. Standards for declaring Variables
4. Standards for Function Declarations
5. Other Standards

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Design Plan:	Document Name: Task Sheet	SWD/Form No. 9
Effective Date:	Version: 1	Page No.

TASK SHEET

Project Ref. No.:	Project Title:	Activity Plan Prepared By:		Date of Preparation of Activity Plan:		
Task Sub division	Description	Planned Start Date	Actual Start Date	Actual Days	Team Member Names	Status
Requirements Specification and Analysis						
Problem Definition						
CRS						
Customer Acceptance Criteria						
Development and System Design						
Project Plan						
Process Design Document						
Process Description Document						
Interface Design Document						

Table Design Document						
GUI Standards Document						
Task Sheet						
Implementation and Coding						
Coding Standards Document						
Coding						
Integration Testing and Review System						
Integration Testing Report						
Review Report						
Final Checklist						

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Design Plan:	Document Name: Testing Document	SWD/Form No. 10
Effective Date:	Version: 1	Page No.

INTEGRATION TESTING REPORT

[illegible]

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Design Plan:	Document Name: Project Review	SWD/Form No. 11
Effective Date:	Version: 1	Page No.

REVIEW REPORT

Date:	Project Plan Activity/ Milestone	Work Specification	Status of the Activity	Remarks	Responsibility

	Prepared By (Student)	Approved By (Teacher)
Date		

FINAL CHECKLIST

(This document has to be filled by the teacher only. The teacher will do a complete functionality testing of the application and his/ her findings and suggestions to this form.)

Design Plan:	Document Name: Final check List	SWD/Form No. 12
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S. No.	Aspect tested	Suggestion/ Remarks
1.	Have all the modules been properly integrated and are they completely functional?	
2.	Does each unit meet its objective and purpose? Are all the validations happening as specified in Process Design?	
3.	Have all Design and Coding standards been followed and implemented?	
4.	Is the GUI design consistent all over?	
5.	Are the codes working as per the specification?	
6.	Does the application's functionality resolve the client problem, and satisfy his needs completely?	

7.	Have the hardware and software been correctly chosen?	
8.	Additional features and utilities that give value addition to the entire project.	

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