
**University of the Punjab**
**Gujranwala Campus**

# First Deliverable

## BSc.IT-1216

**TABLE OF CONTENTS**

# *1 Project Feasibility Report*

"**Online Hussain School Management System**" is a dream coming true project for us; it is not facing any problem and is very viable. The resources including hardware, software, people, procedures and data are sufficient in order to achieve the desired information. The planning for each phase has been done with such perfection that it is hoped that it will be completed within the specified time, it does not infringe with the time constraint and the specified cost. In this feasibility report we have evaluated that this project would be practicable for us. We have studied following types of feasibilities:

- Technical
- Operational
- Economic
- Schedule
- Specification
- Information
- Motivational
- Legal and Ethical

## 1.1 Technical Feasibility

In this technical feasibility analysis, we have evaluated the probability of doing this project, whether it can be developed or not? It was unquestionably the most complicated question for us prior to starting the venture but after a detailed analysis we concluded that the project would definitely be developed because we have all the capability and technologies that are essential to develop this project. The team members possess the technical skills that are required to develop the plan.

## 1.2 Operational Feasibility

Our project team possesses all the technical skills that are required to develop the project, and this can beyond doubt, grip the project successfully and professionally. We have examined that the solution of a specific problem is of such a great importance that it can benefit the end-user and professionals will feel good about the solution. The hardware based web application will be user friendly and it will handle all the operations effectively and efficiently.

## 1.3 Economic Feasibility

The system being developed is economic with respect to organization's point of view. It is cost effective in the sense that has eliminated the paper work completely. The system is also time effective because the calculations are automated which are made at the end of the month or as per the user requirement. The result obtained contains minimum errors and are highly accurate as the data is required.

## 1.4 Schedule Feasibility

In this project time factor is very important this system is scheduled to be installed in six months. In schedule feasibility study, we have judged and evaluated how the project will be completed within the time defined and with the available resources and workforce. Our project team obtained information about the project with the staff members **The Hussain School** by arranging some meetings. We have stated the time limits and milestones/phases in our project.

## 1.5 Specification Feasibility

Specification feasibility analysis has provided us with the study that whether the requirements of the project are unambiguous or not. Every check regarding the project has also been studied in this phase. The limitations of the scope are analyzed in this phase. The hardware and software specifications for the completion of this project are also feasible.

## 1.6 Information Feasibility

The Information feasibility of this project represents that the Information generated by the system is reliable and specific. In the analysis, we have reviewed whether the information available for the project is sufficient, consistent and analytic or not. After all the information is collected it is felt that there is no lack of information for the application to be developed.

## 1.7 Motivational Feasibility

We have reviewed that the end users are motivated to perform essential steps correctly and enthusiastically. All the end users are literate and have a basic knowledge of this system and we hope they will be very cooperative. The client members are enthusiastic, motivated and cooperative to perform the necessary steps correctly and promptly. The Organization knows the importance of this Project and want to automate their manual system.

## 1.8 Legal & Ethical Feasibility

There are no illegal issues and immoral issues that would take place after completion of the project. The project is absolutely a legal one, as it would not generate any problem for others.

# *2 Project Scope*

The scope of school management is very vast. It includes everything regarding the efficient functioning of the educational institution, securing the greatest benefit to the greatest number through an adoption of practical measures. It interprets and clarifies the

functions and the activities of an educational program in fruitful relationships and harmonizes their mutual action. It ensures sound planning, good direction and efficient and systematic execution.
The purpose of any new technology is to make people life easier. This project is database used to manage the school and allows the administrators to register the daily required information of Students, Teachers & office staff.
**School Management System will organize work inside school and proposed system will do the following tasks:**

- ✓ Add student's information such as student name, student class, address etc.
- ✓ Add staff's information such as define designation.
- ✓ Add class's information such as class name etc.
- ✓ Add date sheet for each student in each subject he/she taken.
- ✓ Publish result of every class with section and title .
- ✓ View data about certain student and can edit it like adding or removing a student.
- ✓ View data about certain employee and can edit it like adding or removing an employee.

## *1.3 Project/Product Costing*

### 1.3.1 Project Cost Estimation By Function Point Analysis

**Calculating ILF's (Internal Logical File)**

**tblAdd_events**

| **ILF** :add_events | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Id, event_name, picture, event_date, description(Admin) | 5 | 1 |
| **Complexity** | Low = 5 | |

**tblAdd_staff**

| **ILF** :Add_staff | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Staff_id,full_name,father_name, Gender, Profile_picture,CNIC Number,Father's_CNIC No. E-mail, Cell number, Address, Qualification, Designaton, Salary, date of appointment | 14 | 1 |
| **Complexity** | Low = 5 | |

### tblAdd_students

| **ILF** :Add_students | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Student_id, Date of admission, Registration number, Student picture, class_id, Student_name, Gender, Address, Admission granted, Registration fee, monthly_fee, Receivable fee, Remaining balance, Session, Section, Previous School name, School address, Reason of leaving the school | 19 | 1 |
| **Complexity** | Low = 5 | |

### tblAdd_teachers

| **ILF** :Add_teachers | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Teacher_id,full_name,father_name, Gender, Profile_picture,CNIC Number,Father's_CNIC No. E-mail, Cell number, Address, Qualification, Designaton, Salary, date of appointment | 14 | 1 |
| **Complexity** | Low = 5 | |

### tblAdd_admin

| **ILF** :Add_admin | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Admin_id, , First_name, Last_name, User_name, E-mail, Password | 6 | 1 |
| **Complexity** | Low = 5 | |

### tblClasses

| **ILF** :Classes | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Class_id, , Class_name, Admission fee, Monthly fee | 4 | 1 |
| **Complexity** | Low = 5 | |

### tblEvent_gallary

| **ILF** :Event_gallery | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Id, Event_id, Picture_name | 3 | 2 |
| **Complexity** | Low = 5 | |

### tblFee

| **ILF** : Fee | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Fee_Id, Pg_fee, Pg_add_Fee, nursery_fee, nursery_add_Fee, prep_fee, Prep_add_Fee , One_fee, One_add_Fee, Two_fee, Two_add_Fee, Three_fee, Three_add_Fee, Four_fee, Four_add_Fee, Five_fee, Five_add_Fee, Six_fee, Six_add_Fee, Seven_fee, Seven_add_Fee, Eight_fee, Eight_add_Fee, Ninth_fee, Ninth_add_Fee, Tenth_fee, Tenth_add_Fee | 27 | 1 |
| **Complexity** | Low = 5 | |

### tblAdd_guardian

| **ILF** :Add_guardian | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Guardian_Id, Student_id, Father_name, Father's CNIC, Occupation, Cell Number | 6 | 2 |
| **Complexity** | Low = 5 | |

### tblPage_banner

| **ILF** :Page_Banner | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Banner_ID, Image_name | 2 | 1 |
| **Complexity** | Low = 5 | |

### tblRegistration

| **ILF** :Registration | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Registration_Id, Registration number, Username, Password ,E-mail | 5 | 1 |
| **Complexity** | Low = 5 | |

### tblSections

| **ILF** : Sections | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Section_id, Class_id, Section_Name | 3 | 2 |
| **Complexity** | Low = 5 | |

### tblSession

| **ILF** :Session | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Session_id, Session_name | 2 | 1 |
| **Complexity** | Low = 5 | |

### tblSubjects

| **ILF** :Subjects | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Subject_Id, Class_id, Section_id, Subject_name, Subject_Marks | 5 | 3 |
| **Complexity** | Low = 5 | |

### tblClassTimeTable

| **ILF** : ClassTimeTable | | |
|---|---|---|
| **Description** | **DET** | **RET** |

| | | |
|---|---|---|
| **DET:**<br>ClassTimeTable_ID, ClassWise, SectionWise,<br>Days,Lec1,Lec2,Lec3,Lec4,Lec5,Lec6,Lec7,Lec8,Lec9 | 13 | 1 |
| **Complexity** | Low = 5 | |

**tblDatesheet**

| **ILF** : DateSheet | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>User_ID, Date, Subject_Id, StartTime,EndTime,Class_Id | 6 | 3 |
| **Complexity** | Low = 5 | |

**tblPaperMarks**

| **ILF** :PaperMarks | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Paper_ID, Student_Id, Subject_Id, Marks, Grade_Id, Class_Id, Section_Id,<br>PromotedStatus | 8 | 6 |
| **Complexity** | Average = 7 | |

**tblSetGrades**

| **ILF** :SetGrades | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>GradeID, GradeName, Percentage | 3 | 1 |
| **Complexity** | Low = 5 | |

**tblUniform**

| **ILF** :Uniform | | |
|---|---|---|
| **Description** | **DET** | **RET** |
| **DET**:<br>Uniform_id, Boys_summer, Boys_winter, Girls_summer, Girls_winter | 5 | 1 |
| **Complexity** | Low = 5 | |

**Calculating EI's (External Input)**

| **EI: Add_Events** |
|---|

| | DET | FTR |
|---|---|---|
| | 4 | 1 |
| **Complexity** | Low = 3 | |

| **EI: Edit_Events** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 4 | 1 |
| **Complexity** | Low = 3 | |

| **EI: LogIn** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 2 | 1 |
| **Complexity** | Low = 3 | |

| **EI: Add_event_gallery** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 2 | 1 |
| **Complexity** | Low = 3 | |

| **EI: Add_staff** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 13 | 1 |
| **Complexity** | Low=3 | |

| **EI: Edit_staff** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 13 | 1 |
| **Complexity** | Low=3 | |

| **EI: Add_students** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 18 | 1 |
| **Complexity** | Average = 4 | |

| **EI: Edit_students** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 18 | 1 |

| **Complexity** | Average = 4 |
|---|---|

| **EI: Add_teacher** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 13 | 1 |
| **Complexity** | Low = 3 | |

| **EI: Edit_teacher** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 13 | 1 |
| **Complexity** | Low = 3 | |

| **EI: Add_admin_user** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 5 | 1 |
| **Complexity** | Low=3 | |

| **EI: Edit_admin_user** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 5 | 1 |
| **Complexity** | Low=3 | |

| **EI: Add_Banner** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 1 | 1 |
| **Complexity** | Low=3 | |

| **EI: Edit_Banner** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 1 | 1 |
| **Complexity** | Low=3 | |

| **EI: Add_classes** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 3 | 1 |
| **Complexity** | Low=3 | |

| EI: Registration | | |
|---|---|---|
| | **DET** | **FTR** |
| | 4 | 1 |
| **Complexity** | Low=3 | |

| EI: Add_section | | |
|---|---|---|
| | **DET** | **FTR** |
| | 2 | 1 |
| **Complexity** | Low = 3 | |

| EI: Add_session | | |
|---|---|---|
| | **DET** | **FTR** |
| | 1 | 1 |
| **Complexity** | Low = 3 | |

| EI: Add Subjects | | |
|---|---|---|
| | **DET** | **FTR** |
| | 4 | 1 |
| **Complexity** | Low= 3 | |

| EI: Date Sheet | | |
|---|---|---|
| | **DET** | **FTR** |
| | 7 | 3 |
| **Complexity** | High=6 | |

| EI: Grades | | |
|---|---|---|
| | **DET** | **FTR** |
| | 2 | 1 |
| **Complexity** | Low = 3 | |

| EI: Paper Marks | | |
|---|---|---|
| | **DET** | **FTR** |
| | 7 | 6 |
| **Complexity** | High=6 | |

| EI: Add Fee | | |
|---|---|---|
| | **DET** | **FTR** |

| | | |
|---|---|---|
| | 26 | 1 |
| **Complexity** | Average = 4 | |

| **EI: Uniform** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 4 | 1 |
| **Complexity** | Low = 3 | |

**Calculating EO's (External Outputs)**

| **EO: Show Class Time Table** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 10 | 1 |
| **Complexity** | Low=4 | |

| **EO: View Staff Profile** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 13 | 1 |
| **Complexity** | Low=4 | |

| **EO: Show Monthly Fee of every class** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 26 | 1 |
| **Complexity** | Average = 5 | |

| **EO: View Results of Class** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 8 | 2 |
| **Complexity** | Average = 5 | |

| **EO: View Position Holders of Class** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 9 | 2 |
| **Complexity** | Average = 5 | |

| **EO: Show Failed Student of All Classes** | | |
|---|---|---|
| | **DET** | **FTR** |

| | | |
|---|---|---|
| | 9 | 2 |
| **Complexity** | Average=5 | |

| **EO: Show Uniform Detail** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 4 | 1 |
| **Complexity** | Low = 4 | |

| **EO: Show Student Admission Form** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 20 | 1 |
| **Complexity** | Average=5 | |

| **EO: Show Student Character Certificate** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 8 | 2 |
| **Complexity** | Average=5 | |

| **EO: Show Student School Leaving Certificate** | | |
|---|---|---|
| | **DET** | **FTR** |
| | 20 | 2 |
| **Complexity** | High=7 | |

**Calculating over all Function Points**

| **Section Name** | **Function Point Count** |
|---|---|
| ILF: Add events | 5 |
| ILF: Add staff | 5 |
| ILF: Add teachers | 5 |
| ILF: Add students | 5 |
| ILF: Classes | 5 |
| ILF: Event gallery | 5 |
| ILF :Fee | 5 |
| ILF: Guardian | 5 |
| ILF: Page banner | 5 |
| ILF: Registration | 5 |
| ILF: Sections | 5 |
| ILF: Session | 5 |
| ILF: Subjects | 5 |
| ILF: Class time table | 5 |
| ILF: Date sheet | 5 |

| | |
|---|---|
| ILF: Set grades | 5 |
| ILF: Paper marks | 7 |
| EI: Add events | 3 |
| EI: Edit event | 3 |
| EI: Login | 3 |
| EI: Gallery | 3 |
| EI: Add staff | 3 |
| EI: Edit staff | 3 |
| EI: Add students | 4 |
| EI: Edit students | 4 |
| EI: Add teachers | 3 |
| EI: Edit teachers | 3 |
| EI: Admin users | 3 |
| EI: Edit admin user | 3 |
| EI: Add banner | 3 |
| EI: Edit banner | 3 |
| EI: Classes | 3 |
| EI: Registration | 3 |
| EI: Section | 3 |
| EI: Session | 3 |
| EI: Subjects | 3 |
| EI: Date sheet | 6 |
| EI: Set grades | 3 |
| EI: Paper marks | 6 |
| EI: Fee | 4 |
| EO: Show time table | 4 |
| EO: Show staff profile | 4 |
| EO: Show monthly fee | 5 |
| EO: Show Result | 5 |
| EO: Show Position Holders | 5 |
| EO: Show failed students | 5 |
| EO: Show school leaving certificate | 7 |
| EO: Show character certificate | 5 |
| EO: Show admission form | 5 |
| EO: Show Uniform detail | 4 |
| **Total Unadjusted FP** | **214** |

**Value Adjustment Factors**

| **GSC** | **Value(0-5)** |
|---|---|
| Data communications | 4 |
| Distributed data processing | 0 |
| Performance | 4 |

| | |
|---|---|
| Heavily used configuration | 0 |
| Transaction rate | 3 |
| On-Line data entry | 4 |
| End-user efficiency | 4 |
| On-Line update | 4 |
| Complex processing | 3 |
| Reusability | 3 |
| Installation ease | 4 |
| Operational ease | 4 |
| Multiple sites | 0 |
| Facilitate change | 0 |
| **Total** | **37** |

VAF = 0.65 + (37/100)
= 0.65 + 0.37
= 1.02

Adjusted FP = VAF * Total unadjusted FP
= 1.02x214
= 218.28 FP

**Total Duration of the Project**
Average productivity = 15 FP / Person-month

Effort month = $FP_{estimated}$ / Productivity

= 218.28/ 15
= 14.552/Person month
**Duration of Project** = Effort month / No. of persons

= 14.552/5
= 2.9104 months
**3.1.4 Total Cost of the Project:**

Labor Rate = Rs.20, 000

Cost Per FP = Labor Rate / Avg. Productivity

Where average productivity is 7
= 20, 000 / 15
Cost Per FP = 1333

Total Project Cost = $FP_{estimated}$ * Cost Per FP

= 218.28 * 1333

**Total Project Cost** = Rs.374, 946 R.s

## *1.4 CPM - Critical Path Method*

CPM models the activities and events of a project as a network. Activities are depicted as nodes on the network and events that signify the beginning or ending of activities are depicted as arcs of lines between the nodes. The following is an example of a CPM network diagram:

Following are the steps in CPM project Planning:

1. Specify the individual activities.
2. Determine the sequence of those activities.
3. Draw a network diagram
4. Estimate the completion time for each activity.
5. Identify the critical path (longest path through the network)
6. Update the CPM diagram as the project progresses.

### 1.4.1 Specify the Individual Activities:

Following are the individual activities involved in the project.

- Planning
- Requirement Gathering
- Analysis
- Design
- Construction/Coding
- Testing/Debugging
- Integration
- Deployment

### 1.4.2 Determine the Sequence of the Activities

There are many activities that are dependent on the completion of some other activities. The dependencies of activities upon each other are as under.

(A) Planning → None
(B) Requirement Gathering → Planning
(C) Analysis → Planning, Requirement Gathering
(D) Design → Analysis
(E) Construction / Coding → Design
(F) Testing → Coding
(G) Integration → Testing
(H) Deployment → Integration

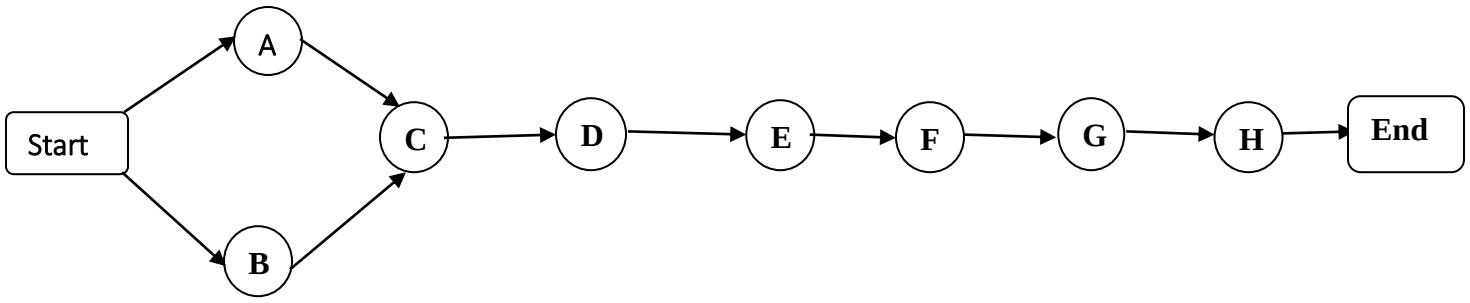
***Task Dependency Table***

| Task ID | Task Description | Duration (Weeks) | Dependencies |
|---|---|---|---|

| | | | |
|---|---|---|---|
| A | Planning | 14 days | None |
| B | Requirement Gathering | 21 days | A |
| C | Analysis | 14 days | A,B |
| D | Design | 28 days | C |
| E | Construction/Coding | 28 days | D |
| F | Testing/Debugging | 14 days | E |
| G | Integration | 7 days | F |
| H | Deployment | 7 days | G |

### 1.4.3 The Network Diagram

Network diagram of the activities is as under:




### 1.4.4 Estimate Activity Completion Time

The time required to complete each activity can be estimated using past experience or the estimates of knowledge persons.

| Task ID | Predecessors | Duration(weeks) |
|---|---|---|
| **A** | **-** | 14 days |
| **B** | **A** | 21 days |
| **C** | **A,B** | 14 days |
| **D** | **C** | 28 days |
| **E** | **D** | 28 days |
| **F** | **E** | 14 days |
| **G** | **F** | 7 days |
| **H** | **G** | 7 days |

### 1.4.5 Identify the Critical Path

The critical path is the longest path through the network. The critical path for the above

network diagram is:

| Task | Dependencies | Duration | ES | EF | LS | LF | TS | FS |
|---|---|---|---|---|---|---|---|---|
| **A** | - | 14 days | 0 | 14 | 0 | 14 | 0 | 0 |
| **B** | - | 21 days | 0 | 21 | 0 | 21 | 0 | 0 |
| **C** | **A,B** | 14 days | 21 | 35 | 21 | 35 | 0 | 0 |
| **D** | **C** | 28 days | 35 | 63 | 35 | 63 | 0 | 0 |
| **E** | **D** | 28 days | 63 | 91 | 63 | 91 | 0 | 0 |
| **F** | **E** | 14 days | 91 | 105 | 91 | 105 | 0 | 0 |
| **G** | **F** | 7 days | 105 | 112 | 105 | 112 | 0 | 0 |
| **H** | **G** | 7 days | 112 | 119 | 112 | 119 | 0 | 0 |

**Possible Paths are**

I. Start → A → C → D → E → F → G → H → END
II. Start → B → C → D → E → F → G → H → END

**Duration of Paths**

14+14+28+28+14+7+7=112
21+14+28+28+14+7+7=119

**The critical path is**

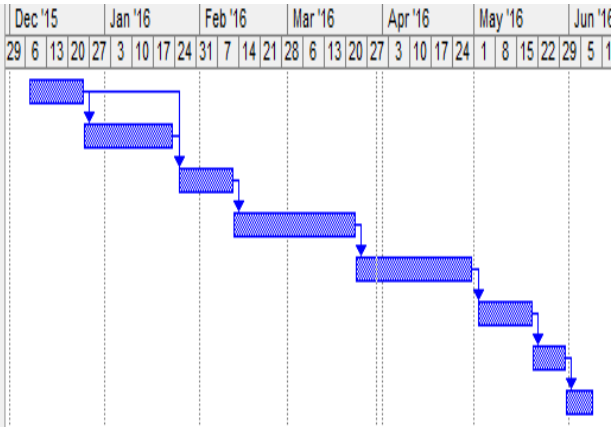
Start → B → C → D → E → F → G → H → END

**Total Duration of the Project:**

Duration of Critical Path (Days) = 119

## *1.5 TimeLine*

| | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 1 | Planning | 14 days | Mon 12/7/15 | Thu 12/24/15 | |
| 2 | Requirement Gathering | 21 days | Fri 12/25/15 | Fri 1/22/16 | 1 |
| 3 | Analysis | 14 days | Mon 1/25/16 | Thu 2/11/16 | 1,2 |
| 4 | Desing | 28 days | Fri 2/12/16 | Tue 3/22/16 | 3 |
| 5 | Coding/Construction | 28 days | Wed 3/23/16 | Fri 4/29/16 | 4 |
| 6 | Testing/Debugging | 14 days | Mon 5/2/16 | Thu 5/19/16 | 5 |
| 7 | Integration | 7 days | Fri 5/20/16 | Mon 5/30/16 | 6 |
| 8 | Deployment | 7 days | Tue 5/31/16 | Wed 6/8/16 | 7 |




## *1.6 Introduction to Team member and their skill set*

1) Zunaira Akhtar BT12124
2) Arooj Maqbool BT12105

3) Javeria Murtaza BT12113
4) Fizza Taqdees BT12118
5) Fatima Jalali BT12136

***Zunaira Akhtar:***

She managing and controlling all the programming related to designing and coding. She is expert in PHP, Ajax, Database, Bootstrap, CSS, and Other Software Engineering skills. She is managing overall group activities.

## Arooj Maqbool:

She is responsible for documentation of the project. She also helps in requirement gathering.

## Javeria Murtaza:

She is responsible for requirement gathering. And managing the database.

## Fizza Taqdees:

She is responsible for designing the website. She also helps in managing the database.

## Fatima Jalali:

She is responsible for designing and integrates all the tasks. She helps in documentation. She is also responsible for implementing AJAX in project.

## *1.7 Tools and Technology with reasoning*

### 1.7.1 Development Technology

**PHP**

Open source language. Easy to use and platform independent.PHP has enhanced features over other languages. Working with PHP and learning PHP we can make not only websites or desktop App but using PHP we can make any android apps, IPhone apps, IOS files, games etc. which is not available in any other language. Runs faster over java. By using java we cannot create any I phone app. PHP is:

- ✓ Open Source.
- ✓ License is cheap.
- ✓ Scalable and flexible.
- ✓ High performance.

- ✓ Strong data protection.

### MySQL

MySQL is a relational database management system (RDBMS), and ships with no GUI tools to administer MySQL databases or manage data contained within the databases. Users may use the included command line tools, or use MySQL "front-ends", desktop software and web applications that create and manage MySQL databases, build database structures, back up data, inspect status, and work with data records. The official set of MySQL front-end tools, MySQL Workbench is actively developed by Oracle, and is freely available for use.

### 1.7.2 Development Tools

- Adobe Dreamweaver CS6
- SQLyog

### Adobe Dreamweaver CS6

Adobe **Dreamweaver** is an application used by web designers and developers to create websites and applications for use across multiple targets. Including browsers, devices, and tablets. Web designers use **Dreamweaver** for creating website prototypes using web-friendly artwork.

### SQLyog

**SQLyog** provides you with powerful means to manage your MySQL databases. It Runs on all Windows version from Win XP to Win 8.x (desktop systems) as well as "Windows Server" systems of same generations (Windows Server 2003 and higher).Create/Drop/Alter Tables, Stored Procedures, Functions, Views, Triggers and Events. Protect your data with SSL encryption. Smart AutoComplete. Formats SQL statements. Proactive Query Profiler. Favorite Manager to neatly organize your favorite SQL statements. Very fast retrieval of data.

### *1.7.2* Case Tools

1. Microsoft Office 2012
2. Microsoft Project 2010
3. Edraw max
4. Adobe Photoshop

### Microsoft Office 2010

Microsoft office is used to make documentation of the project in a professional way.

### Microsoft Project 2010

Microsoft Project is used to assist a project manager in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads. This application is used to create critical path schedules. Schedules can be resource level, and chains are visualized in a Gantt chart.

### Edraw Max

Edraw max is used to create sequence diagrams and use cases, network diagram, class diagram and many more.

### Adobe Photoshop

Photoshop is used in logo designing and in designing of website template.

## *1.8 Vision Document*

Online school management system is developed to resolve the irregularities and inconsistencies of the manual management system. We are determined to represent the true picture of the school's management system that is free of manual errors and discrepancy.

We have defined out list of the stakeholders concerned with the system. And also requirements have been refined by the discussion with the user to extract what they actually want to see in the system. System boundaries have been articulated using actors.

Goal of the secure system will be obtained by using restrictions and constraints against any type of unauthorized access. System has not any type of conflicts with political, economic and environmental issues. All the key features of the system have been identified and defined explicitly. Key features solve the problems identified in manual system. Key features defined are reliable with constraints that are identified.

## *1.9 Risk List*

| S# | Risk | Description |
|---|---|---|
| **1** | Technology Risk | If the platform requirement is not fulfilled then may be the system fail to execute. |
| **2** | User Risk | Users cannot use this School Management System if they are un aware and don't have any idea regarding the system. |
| **3** | Organizational Risk | Poor communication always leads to the problems between the people within or the ones that are directly or indirectly attached to the organization. |
| **4** | Estimation Risk | The cost estimated for developing the system may exceed the exception resulting in budget imbalance. |
| **5** | Used Tools Risk | The CI and HR will operate only on PHP hence if the platform is not present in other organizations, this system will fail to operate. |

**********REQUIREMENTS ENGINEERING**********

# *1 Introduction*

Requirement engineering process here has provided the appropriate mechanism for understanding what the customer wants, analyzing need, and assessing feasibility by negotiating with user and specifying the solution unambiguously.

## 1.1 Systems Specifications

**Introduction**

In the modern world of technology, computers are affecting our lives in more ways than we probably are aware of **Computerized Management**, maintaining information of an educational institutes, School, other the list is endless.

A **School Management System** is a large database system which can be used for managing school's daily work. It is configurable and can be configured to meet most individual school's needs. It is a multi-user system and can be used by hundreds of users at same time. Generally speaking, it is platform available for running on a Local Area Network (LAN).

This project will handle whole the activities of the school. It provides facilities to keep the records of student, salary, teachers, clerk, library, result, News & event and labs with all their required details along with all required transaction handling. It has facilities to generate various types of reports, which are required by the management during normal business operations to operate the business effectively.

**Existing system**

Existing system is one of the first tasks to find the information. The study an existing system is important to get more information and views about the system that is going to be developed. Furthermore, study an existing system includes investigation about the current system. Based on the information gathered, the new system will be built. In the current system we need to keep a number of records related to the student and want to enter the details of the student and the marks manually. In this system only the teacher or the school authority views the mark of the student and they want to enter the details of the student. This is time consuming and has much cost

.

**Disadvantage of existing system:**

- Requires a lot of time as well as manpower.
- It is very difficult to maintain or update all the records and retrieve a certain data.
- The loss or damage of any of the registers leads to the damage of hundreds of records at a time.
- Reports need to be generated manually.
- Many register use to store the data.

- More strength and strain of manual labour needed
- Repetition of same procedure.
- Low security.
- Data redundancy.
- Difficulty to handle.
- Difficulty to update data.
- Record keeping is difficult.

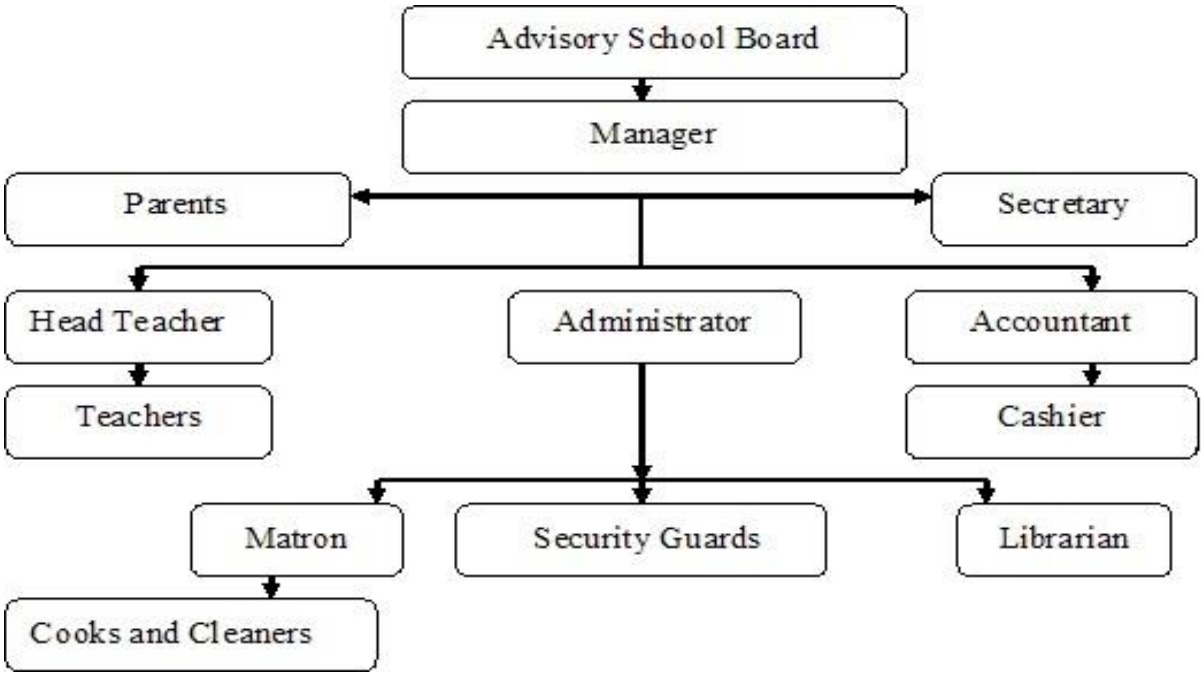
**Proposed system**

In our proposed system we have the provision for adding the details of the students by themselves. So the overhead of the school authorities and the teachers is become less. Another advantage of the system is that it is very easy to edit the details of the student and delete a student when it found unnecessary. The marks of the student are added in the database and so students can also view the marks whenever they want.

**Advantage of proposed system**

- Strength and strain of manual labour can be reduced
- High security
- Data redundancy can be avoided to some extent
- Data consistency
- Easy to handle
- Less human error
- User friendly interface
- Fact access to database
- Less error
- Easy data updating
- More storage capacity
- Easy record keeping
- Backup data can be easily generated

**Organizational Chart**




**Scope of the System**

The scope of school management is very vast. It includes everything regarding the efficient functioning of the educational institution, securing the greatest benefit to the greatest number through an adoption of practical measures. It interprets and clarifies the functions and the activities of an educational program in fruitful relationships and harmonizes their mutual action. It ensures sound planning, good direction and efficient and systematic execution.

The purpose of any new technology is to make people life easier. This project is database used to manage the school and allows the administrators to register the daily required information of Students, Teachers & office staff.

**School Management System will organize work inside school and proposed system will do the following tasks:**

- ✓ Add student's information such as student name, student class, address etc.
- ✓ Add staff's information such as define designation.
- ✓ Add class's information such as class name etc.
- ✓ Add date sheet for each student in each subject he/she taken.
- ✓ Publish result of every class with section and title.
- ✓ View data about certain student and can edit it like adding or removing a student.
- ✓ View data about certain employee and can edit it like adding or removing an employee.

**Summary of Requirements (Initial Requirements)**

**"Online School Management System" is a web** application for admin, staff, students and their parents. The purpose is to automate the school's system to facilitate everyone. Moreover it will switch the admin, faculty and others to achieve the benefits of latest

technology as they will no longer need to do any work manually and to maintain paper work. The concept, at its basic, provides for an environment that allows following.

**Admin**

- Admin will securely login to the system.
- Admin will be able to change his/her password.
- Admin will keep/maintain profile information of all the employees and students.
- Admin will be able to store/update events information.
- Admin will be able to keep/update student's result.

**Employee/Students**

- Employees will be able to view their profile.
- Students will be able to view their profile and result.
- Students will be able to view information about the events.

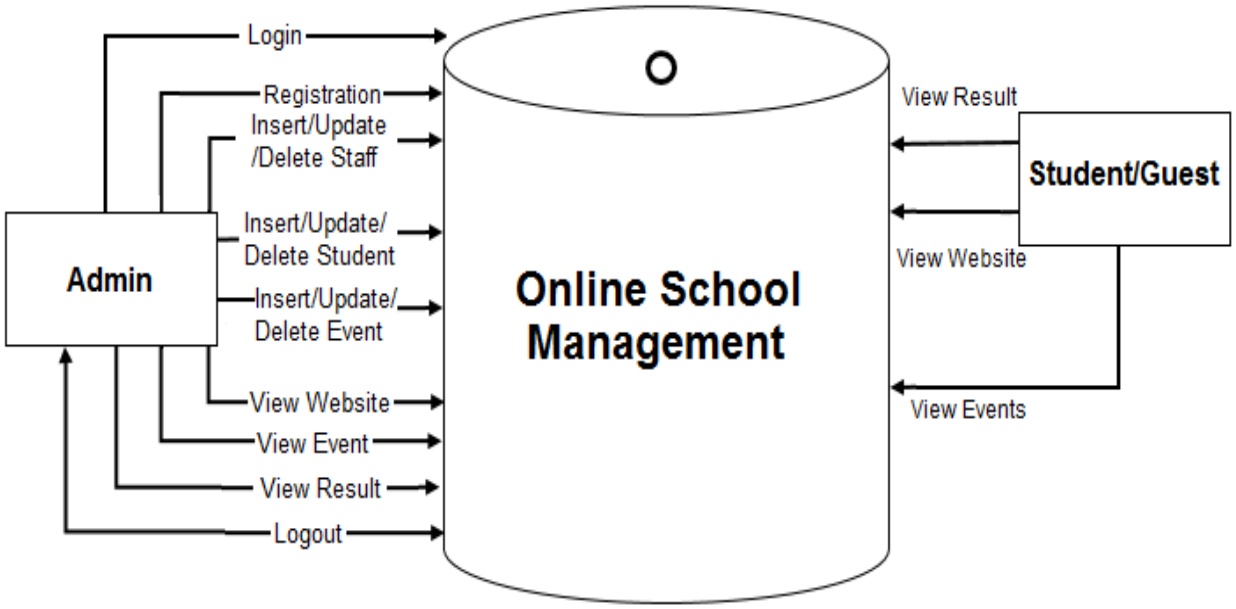
## 1.2 Identifying External Entities

The external entities are the persons who will be interacting with the system. They are:

- **Admin**
- **Employees**
- **Students**

## 1.3 Context Level Data Flow Diagram

A context diagram is a top level (also known as Level 0) data flow diagram. It only contains one process node (process 0) that generalizes the function of the entire system in relationship to external entities.




## 1.4 Capture "shall" Statements

Following are the "shall" statement for the system, and they would also be called functional requirements.

| External Entities | Initial Requirements |
|---|---|
| **Admin** | Admin "shall" login himself to the system. |
| **Admin** | Supervisor "shall" keep/maintain profile information of all the employees and students |
| **Admin** | Supervisor "shall" keep/store the information of employees and students. |
| **Admin** | Supervisor "shall" keep the records of all the events of the school. |
| **Admin** | Supervisor "shall" view all report. |
| **Admin** | Supervisor "shall" change his password. |
| **Student** | Student "shall" register him/herself. |

| | |
|---|---|
| **Student** | Student "shall" view their result. |

## 1.5 Allocate Requirements

Allocate the requirements in the use cases.

| Sr# | Initial Requirements | Use Case Name |
|---|---|---|
| **1.0** | Admin "shall" login himself to the system. | UC_Login |
| **2.0** | Admin "shall" register students and staff members. | UC_Registration |
| **3.0** | Admin "shall" store/delete/update the information of staff. | UC_Insert/Update/Delete Staff |
| **4.0** | Admin "shall" store/delete/update the information of students. | UC_Insert/Update/Delete Students |
| **5.0** | Admin "shall" keep the records of all the results of the school. | UC_Insert/Update/Delete Result |
| **6.0** | Admin "shall" store/delete/update the information of events | UC_Insert/Update/Delete Events |
| **7.0** | Students/guest "shall" view results. | UC_View Results |
| **8.0** | Students/guest "shall" view events. | UC_View Events |
| **9.0** | Students/guest "shall" view website. | UC_View Website |
| **10.0** | Admin "shall" logout himself from the system. | UC_LogOut |

## 1.6 Priorities Requirements

Requirements must be prioritized as this will help achieve tasks easily. Rank them as "Highest, Medium and Lowest".

| Sr# | Rank | Initial Requirements | Use Case ID | Use Case Name |
|---|---|---|---|---|
| **1.0** | **High** | Admin "shall" login himself to the system. | **UC_1** | UC_Login |
| **2.0** | **High** | Admin "shall" register students and staff members. | **UC_2** | UC_Registration |
| **3.0** | **Average** | Admin "shall" store/delete/update the information of staff. | **UC_3** | UC_Insert/Update/Delete Staff |
| **4.0** | **Average** | Admin "shall" store/delete/update the information of the students. | **UC_4** | UC_Insert/Update/Delete Students |

| | | | | |
|---|---|---|---|---|
| **5.0** | **Average** | Admin "shall" keep the records of all the results of the school. | **UC_5** | UC_Insert/Update/Delete Result |
| **6.0** | **Average** | Admin "shall" store/delete/update the information of events | **UC_6** | UC_Insert/Update/Delete Events |
| **7.0** | **Low** | Students/guest "shall" view results. | **UC_7** | UC_View Results |
| **8.0** | **Low** | Students/guest "shall" view events. | **UC_8** | UC_View Events |
| **9.0** | **Low** | Students/guest "shall" view website. | **UC_9** | UC_View Website |
| **10.0** | **Average** | Admin "shall" logout himself from the system | **UC_10** | UC_LogOut |

## 1.7 Requirements Traceability Matrix

| Sr# | System Specification Text | Build | Use Case Name | Category |
|---|---|---|---|---|
| **1.0** | Admin "shall" login himself to the system. | **B1** | UC_Login | **Educational** |
| **2.0** | Admin "shall" register students and staff members. | **B1** | UC_Registration | **Educational** |
| **3.0** | Admin "shall" store/delete/update the information of staff. | **B1** | UC_Insert/Update/Delete Staff | **Educational** |
| **4.0** | Admin "shall" store/delete/update the information of the students. | **B1** | UC_Insert/Update/Delete Students | **Educational** |
| **5.0** | Admin "shall" keep the records of all the results of the school. | **B1** | UC_Insert/Update/Delete Result | **Educational** |
| **6.0** | Admin "shall" store/delete/update the information of events | **B1** | UC_Insert/Update/Delete Events | **Educational** |
| **7.0** | Students/guest "shall" view results. | **B1** | UC_View Results | **Educational** |
| **8.0** | Students/guest "shall" view events. | **B1** | UC_View Events | **Educational** |
| **9.0** | Students/guest "shall" view website. | **B1** | UC_View Website | **Educational** |

| | | | | |
|---|---|---|---|---|
| **10.0** | Admin "shall" logout himself from the system | **B1** | UC_LogOut | **Educational** |

### 1.8 High Level Use case Diagram