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INTRODUCTION TO ITP

Lecture 1

Sri Lanka Institute of Information Technology
B. Sc. Special Honors in Information Technology
Year 2 – Semester 2

Agenda

- Introduction to ITP
- Semester Plan
- Assessment Details
- Project Initiation
- Guidelines to Succeed the Project
- Proposal Document Template

Course Identification

- Course Name: Information Technology Project (ITP)
- Course Code: IT2080
- Credit Points: 4
- Duration: One Semester
- Enrollment Key : IT2080

Pre-requisites

- Knowledge acquired through one and half years of completing the Associate Diploma Course in Information Technology

Mode of Delivery

- **Formal**
  - 2 hr Lecture session per week / Discussions/Presentations
  - 1 hr Tutorial per week/ Discussions/Presentations
  - 2 hr Lab session per week
- **Informal**
  - Group discussions among the group members
  - Members participating in project related work
  - Meeting lecturer & supervisor (by appointment)…Team Leader
  - Meeting your client (by appointment)

Mode of Delivery contd.

- **Resources and Materials**
  - All the unit resources and materials will be delivered using the courseweb.
  - Every student must obtain access to the courseweb and enroll to the ITP unit.
- **Notices**
  - All notices will be published on the courseweb unit page
  - Check the unit page regularly

Objectives of ITP

What is ITP?

- An important piece of work in your degree program
- Involves students in developing, managing and achieving the objectives of an *ICT project*
- A major independent project activity which involves the **defining of the project objectives**, the preparation of a project documents and showing the various stages of completion of project and develop the product.

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Objectives of ITP

Why do you need ITP?

- Identify a real-world problem
- Formulate an IT solution to the problem
- Provides an opportunity to demonstrate your knowledge & skills in a practical ICT application
- A benchmark of your ability to solve an industry problem using ICT
- Learn to deal with clients
- Improve team work skills
- Opportunity to follow best practices
- Become outstanding graduate

Categories of Projects

- **Industry Based Projects**
  - These projects must have a real client.
- **Projects aligned with competitions**
  - Example : Microsoft Imagine Cup

Categories of Projects

- **Further in your project you can develop a :**
  - Desktop Application
  - Web-based Application
    - But not a Web site

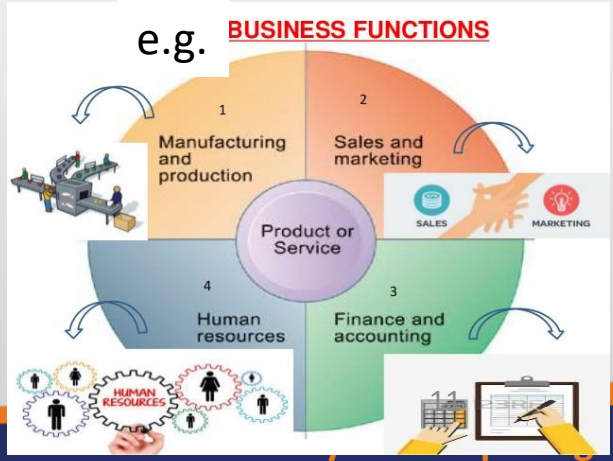
Common examples from past:

- Vehicle Management System
- Hotel Management System
- Student Management System
- Hospital Management System
- Designing systems (Fashion/Fabric)

Project Scope

- **Select a project with the correct scope(size).**
  - The scope must not be too small or too large for a 12 week duration.
  - The project must have at least 8 significant business functions.
  - Work towards a final product (Integrated work)

e.g.



Scope for Individual Member

- Every member should be aware of business process
- All the members should have a good overall understanding about the entire project in depth and the functions assigned.
- Develop the functionalities
  - Tasks/functions of the system with **meaningful** CRUD (Insert, Update and Delete) operations
  - Form validation
  - Search operations
- Combine(integrate) with others' functions
- Each member should generate at least one meaningful report for the respective function.
- Other than individual function development, all the members should involve in document preparation.

Contribution of the Team Members

- **You must handle your function from "end-to-end".**
  - You are in-charge of documenting, designing, coding, testing, integrating, etc. your function.
  - Maintain a repository, Handle version control (use Git &GitHub)
  - It should not be the case that one member is only writing documents, the other one just doing the ER and the database, another one only designing the user interfaces etc..

ITP Group

- A group with 5 to 8 members from same batch(Student group).
- Cannot exceed the limit of 8 members in one group.
- A group leader should appoint by the group itself.
- The project group should register using course web respective batch link.

  Note: Ignore this if you have already done.
- Students without a group should talk to respective Lecture assigned for batch to find a group.

Semester Plan

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Semester Plan

	ITP Semester 2, 2021		
Week	Lecture & Tute (3 hours)	Evaluation (2 hours) by all ITP staff	Documents
1	Introduction to ITP Project and Proposal Writing	Charter Discussion	Draft Charter submission
2	Lecture and Scrum activity	No	Charter submission
3	Proposal Evaluation	Proposal Evaluation	Proposal document
4	Proposal Evaluation	Proposal Evaluation	Proposal document
5	Interface Designing - activities	No	Submission
6	ER Diagram activity	No	Submission
7	Informal progress Evaluation	Informal progress Evaluation	Submission
8	**Mid Week**		
9	Progress Evaluation	Progress Evaluation	
10	Progress Evaluation	Progress Evaluation	
11	System Testing activity,Git report	No	submission
12	Final Report writing	No	
13	Final Presentation and Viva	Final Presentation and Viva	
14	Final Presentation and Viva	Final Presentation and Viva	Final Document (Online Submission)

Lectures

- Lectures are activity based.
- Participation for lectures is compulsory and there are marks allocated for activity participation.

Evaluation (2 hours)

- Evaluation sessions will be conduct only for project evaluations and students are encouraged to spend that time for group meetings, client meetings and project development when there are no evaluations scheduled

Self-Study

- There are no allocated labs for ITP in timetable.
- You should self-study following and use them in your project.
  - Trello (Agile Project Management Tool)
  - **Git & Github** (Version Control Software & repository)
  - Juni (Unit Testing)
  - **Coding standards**
  - SonarQube for code quality
- The reports/ screenshots should be included in the final report as a proof of using those for the project (marks will be allocated)

Assessment Details

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Evaluation	Marks (%)
Proposal Presentation	10
Proposal Document	5
Progress Presentation	20
Final Presentation	15
Individual Viva	30
Final report	10
In-class activity participation	10
Total	100

Evaluation Criteria

- Project proposal
  - Problem identification
  - Overall understanding of the project
  - Know the expected outcomes
  - Understanding of individual functions
  - Quality and depth of content
  - Communication skills

Evaluation Criteria

- Progress presentation
  - Appropriateness of GUI(Content, appearance, navigation, user-friendliness, logic)
  - Completion of CRUD operations
  - Form validation
  - Database connectivity
  - System integration
  - Product completion (%)

- Other assessment details will be covered in lectures

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Assessments

- During an evaluation all members must be present
- Absent members will not get any marks for that evaluation
- Some evaluations may held **during the lecture and the tutorial sessions**
    - Most evaluations are group activities
- Therefore attending all lectures and the tutorial sessions are important
- All the members of the group must attend the same lecture and the tutorial session

Assessments

- In every assessment the contribution of each member is assessed
  - **A "common mark" is not given for the entire project**
- Thus to pass the unit every member's involvement in all project stages and activities are necessary
- Project evaluations are compulsory. Therfore participation is necessary

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Steps to start the Project

1. Form a group (8 Members)
2. Find a project(better if it is a client project)
3. Submit draft charter document (already done)
4. Discuss the project with the ITP lecturers assigned to your batch
5. Present at Proposal Presentation
6. Submit the approved project charter (Finalized charter)

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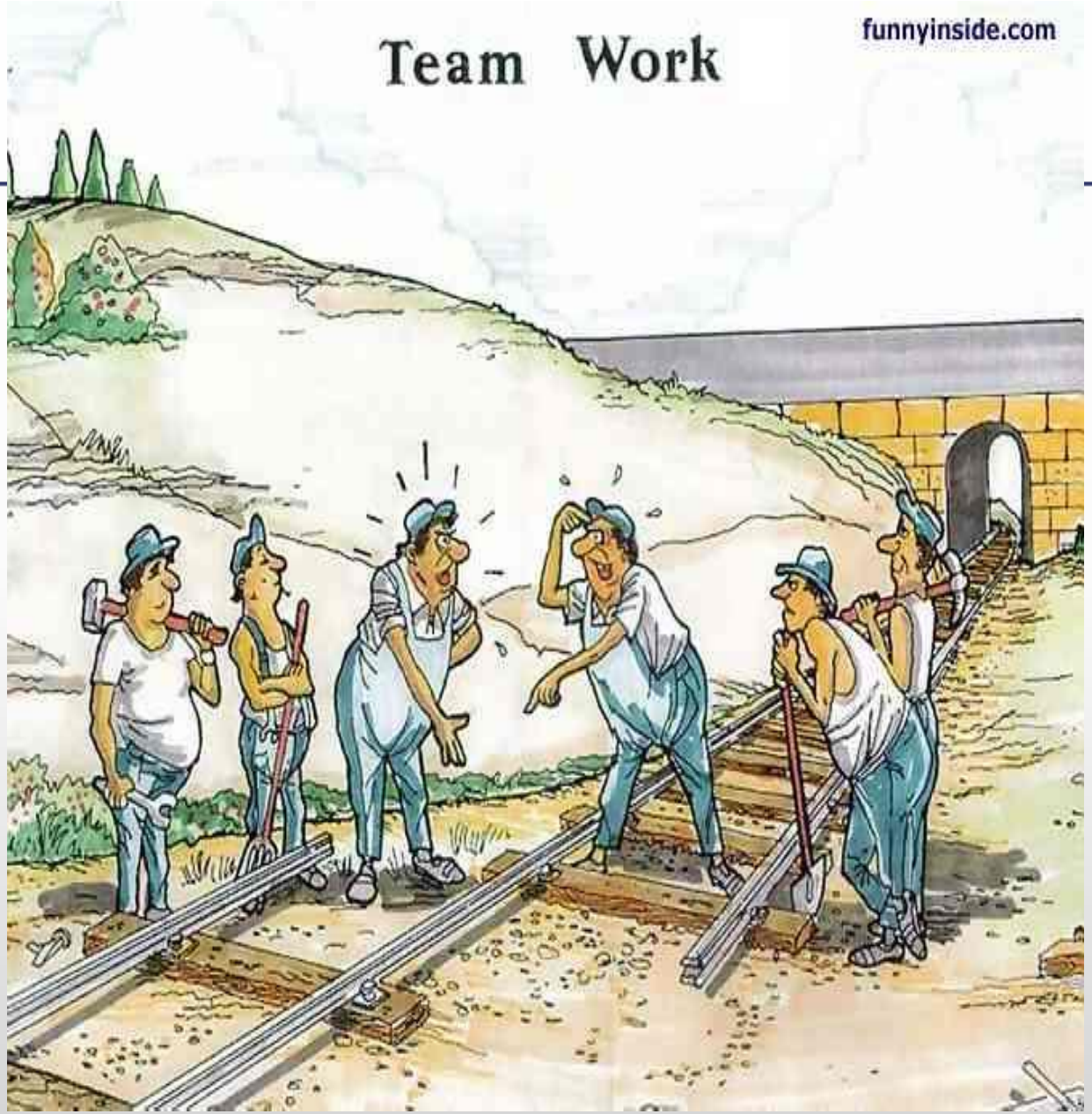
Guidelines to Succeed a Project

Why Do Projects Fail?

- People begin programming before they understand the problem
  - A team that begins programming too soon will end up writing good software that solves the wrong problem
- The team has an unrealistic idea about how much work is involved.
  - From far away, most complex problems seem simple to solve
  - Teams can commit to impossible deadlines by being overly optimistic and not thinking through the work

Why Do Projects Fail?

- Defects are injected early but discovered late.
  - Everyone assumes that the testers will catch all of the defects that were injected throughout the project
- The team does not have a good sense of the over all state of the project.
- Lack of team work.


Team Work
funnyinside.com

How can we make sure that our projects succeed?

- Make sure all decisions are based on **openly shared** information
- All project documents, schedules, estimates, plans and other work products should be shared with the entire team, stakeholders, users and anyone else in the organization who wants them.
- Major decisions that are made about the project should be well-supported and explained.

How can we make sure that our projects succeed?

- Just because a leader/manager has responsibility for a project's success, it doesn't mean that he's more qualified to make decisions than the team members
- Introduce software quality from the very beginning of the project
- Use good engineering practices (coding standards, CICD)
- Managers and teams often want to cut important tasks – especially estimation, reviews, requirements gathering and testing.

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Contact ITP Lecturers

Lecturer-in-Charge -Ms. Geethanjali Wimalaratne

- Ms. Geethanjali Wimalaratne (Metro, Malabe) - geethanjali.w@sliit.lk
- Ms. Kushnara Suriyawansa(Malabe) –kushnara.s@sliit.lk
- Mr. S.M.B. Harshanath(Metro, Malabe) –harshanath.s@sliit.lk
- Mr. Ishara Gamage (Malabe)- ishara.g@sliit.lk
- Ms. Archchana Kugathasan(Malabe) Archchana Kugathasan
- Ms. Amali Gunasinghe(Malabe) amali.g@sliit.lk

- Ms. Chamari Silva (Matara) -chamari.s@sliit.lk
- Kandy -Contact the coordinator

Submissions

- Project Proposal document(pdf)
- Final Charter –at the end of proposal presentations, there will be a link in course web to submit revised project charter.
- Group activity documents
- Final Document
  - Need to submit at the final week of the semester
  - All the members in the group must contribute
- Group documents can be submitted by one member of the team to the link related to your batch. The document name should contain the groupID

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Academic Integrity Policy

- Are you aware that following are not accepted in SLIIT.
  - Plagiarism - using work and ideas of other individuals intentionally or unintentionally
  - Collusion - preparing individual assignments together and submitting similar work for assessment.
  - Cheating - obtaining or giving assistance during the course of an examination or assessment without approval
  - Falsification – providing fabricated information or making use of such materials
- Committing above offenses come with serious consequences
- See General support section of Courseweb for full information.

Project Proposal

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Project Proposal Document Template

- Maximum 10-15 pages document (excluding the appendix)
- Content
  - Introduction
    - Company/Client Background
    - Problem Statement –Current method of handling the tasks and problems faced by the client
    - Solution –Proposed solution
    - Benefits of the System
  - System overview –Describe using a high level system overview diagram
  - System Functions –Explain each function in detail
  - Technologies

Project Proposal Document Template

- Constraints/Limitations –Ignore if not applicable
- Project management plan
- Work breakdown structure –Tasks and description of functions allocated for each member. (Use a tabular format)
- References –IEEE format
- Appendix –Additional documents you may think important to include;

-This is optional

Sample Project:
School Management System

School Management system

- Client: Education Institute/School in your area
- Goal : To automate the school manual work

- Identify the main functions of the school
- Identify the people who are involved with the system and why they use the system

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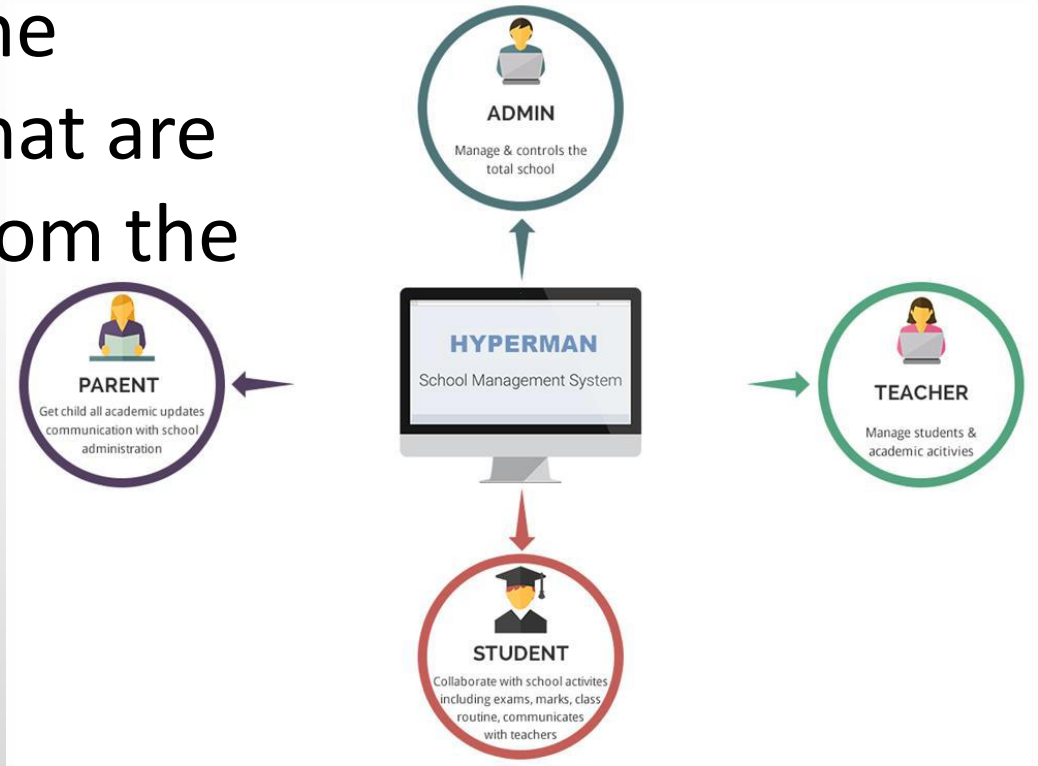
School functions can be categorized according to the client requirements

User Levels

Identify who will going to use the system and what are the benefits from the system.



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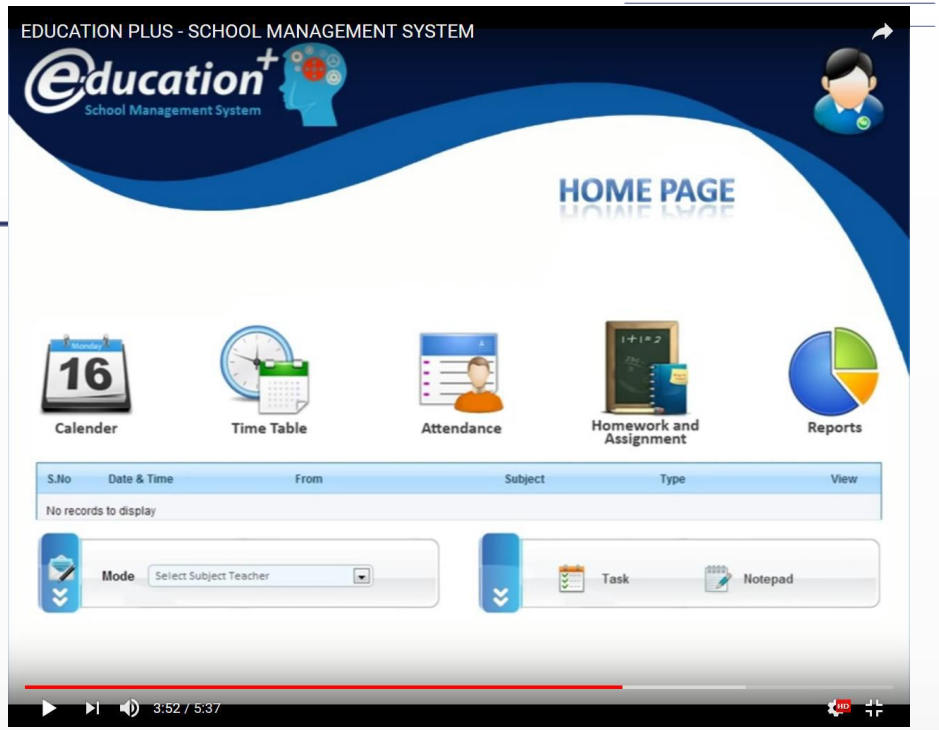
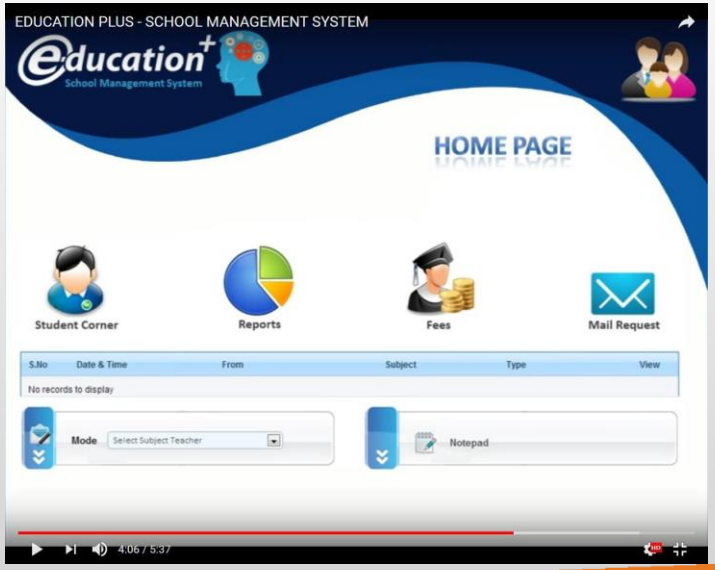
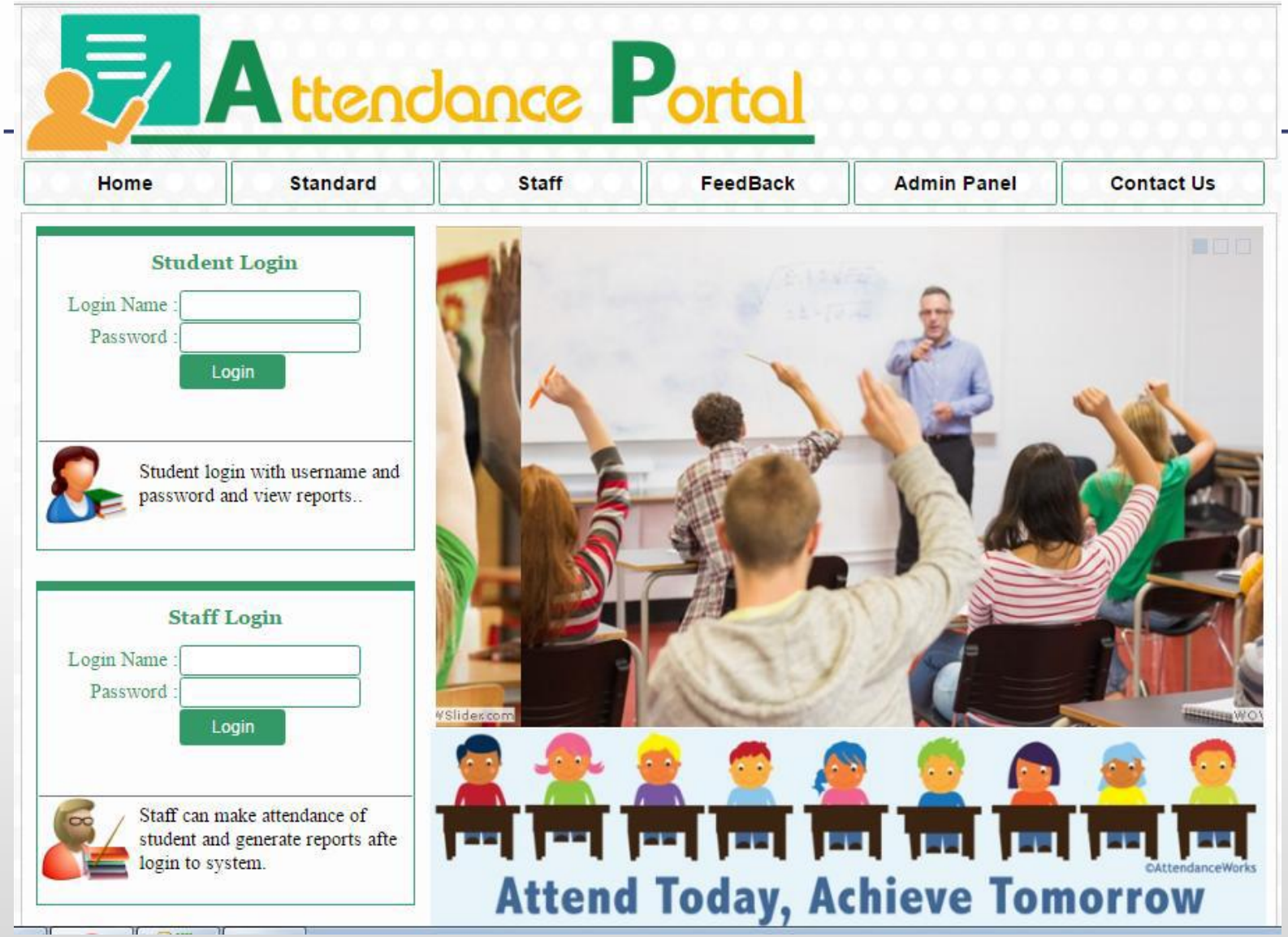
Sample Home page

EDUCATION PLUS - SCHOOL MANAGEMENT SYSTEM
education
School Management System
HOME PAGE
My Corner
Lesson Management
Exam Planning
Exam Management
Evaluation
Reports
S.No
Date & Time
From
Subject
Type
View
No records to display
Mode
Individual
Group
Task
Notepad
3:28 / 5:37


EDUCATION PLUS - SCHOOL MANAGEMENT SYSTEM
education
School Management System
HOME PAGE
16
Calender
Time Table
Attendance
Homework and Assignment
Reports
S.No
Date & Time
From
Subject
Type
View
No records to display
Mode
Select Subject Teacher
Task
Notepad
3:52 / 5:37


EDUCATION PLUS - SCHOOL MANAGEMENT SYSTEM
education
School Management System
HOME PAGE
Student Corner
Reports
Fees
Mail Request
S.No
Date & Time
From
Subject
Type
View
No records to display
Mode
Select Subject Teacher
Notepad
4:06 / 5:37


Attendance Portal
Home
Standard
Staff
FeedBack
Admin Panel
Contact Us
Student Login
Login Name :
Password :
Login
Student login with username and password and view reports..
Staff Login
Login Name :
Password :
Login
Staff can make attendance of student and generate reports afte login to system.
©AttendanceWorks
Attend Today, Achieve Tomorrow

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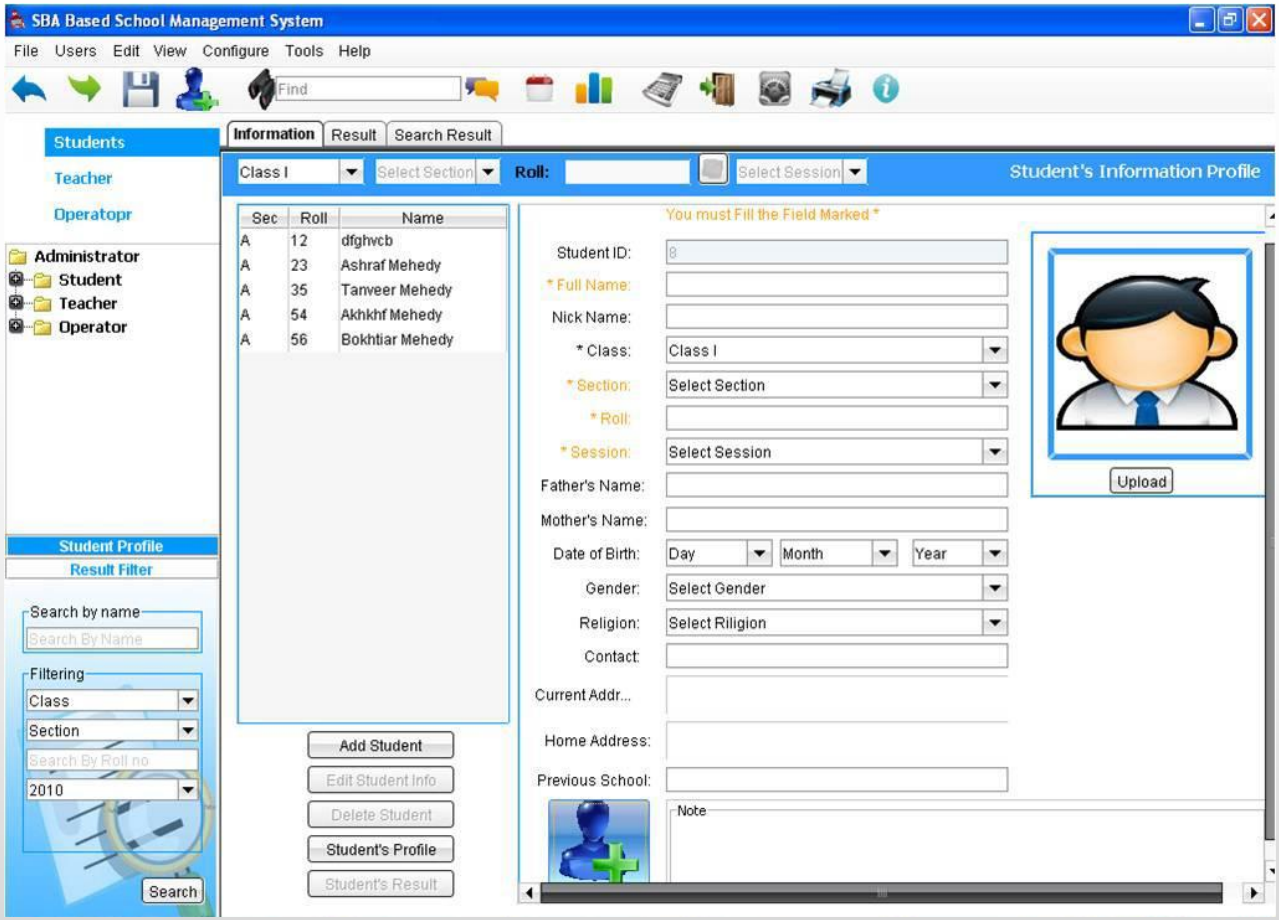
Sample form



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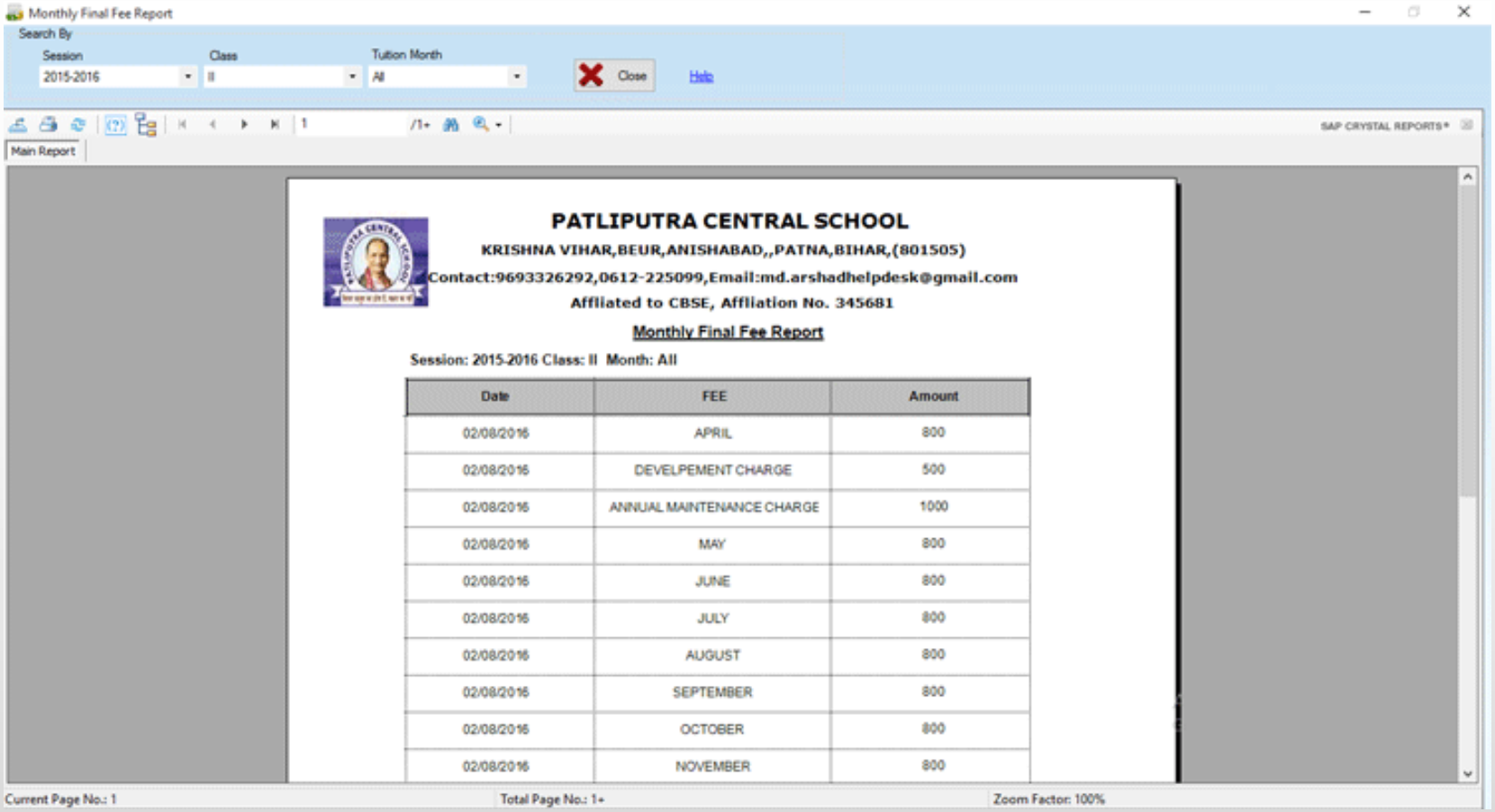
Sample report

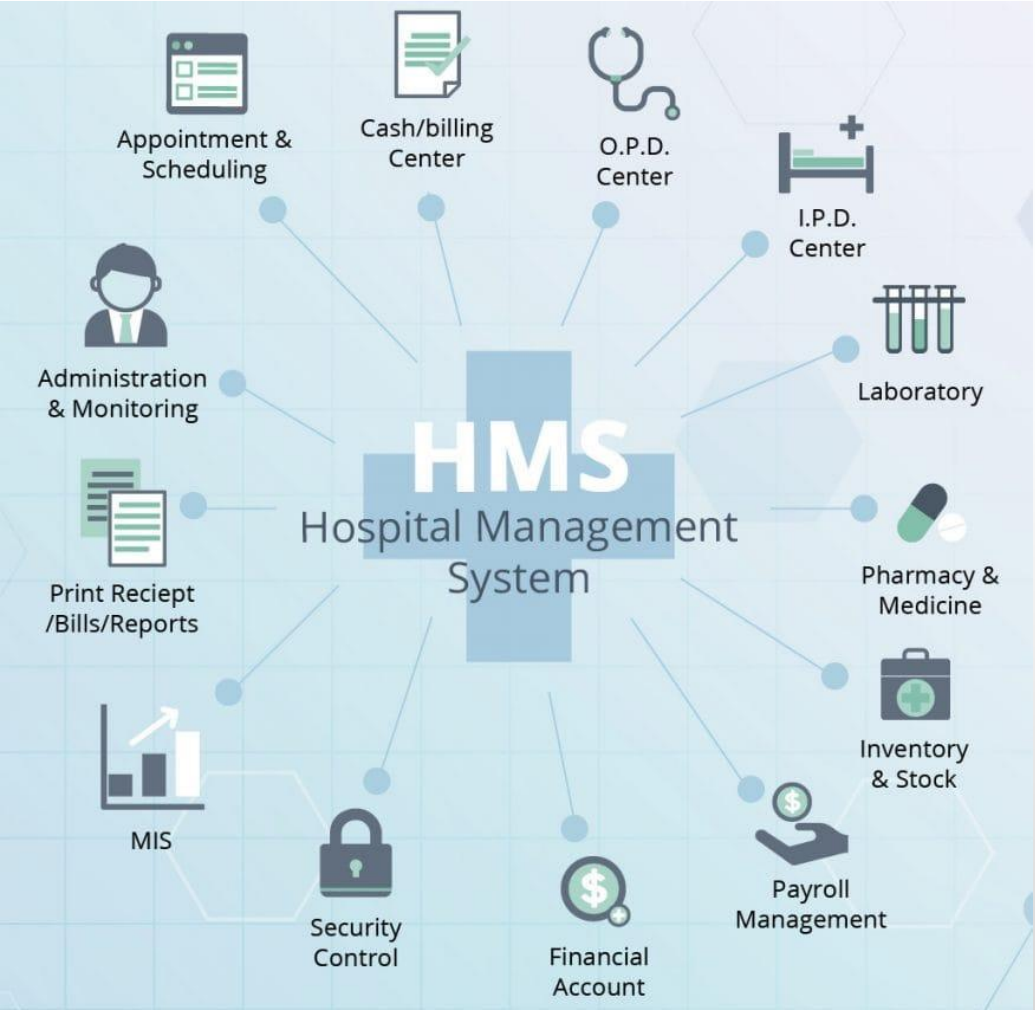


Sample Project:
Hospital Management System

Hospital Management system

- Client: Hospital in your area.
- Goal : To automate the hospital manual work
- Identify the main functions of the hospital
- Identify the people who are involved with the system and why they use the system

Functions can be categorized according to the client requirements



https://existek.com/blog/hospital-managment-system/

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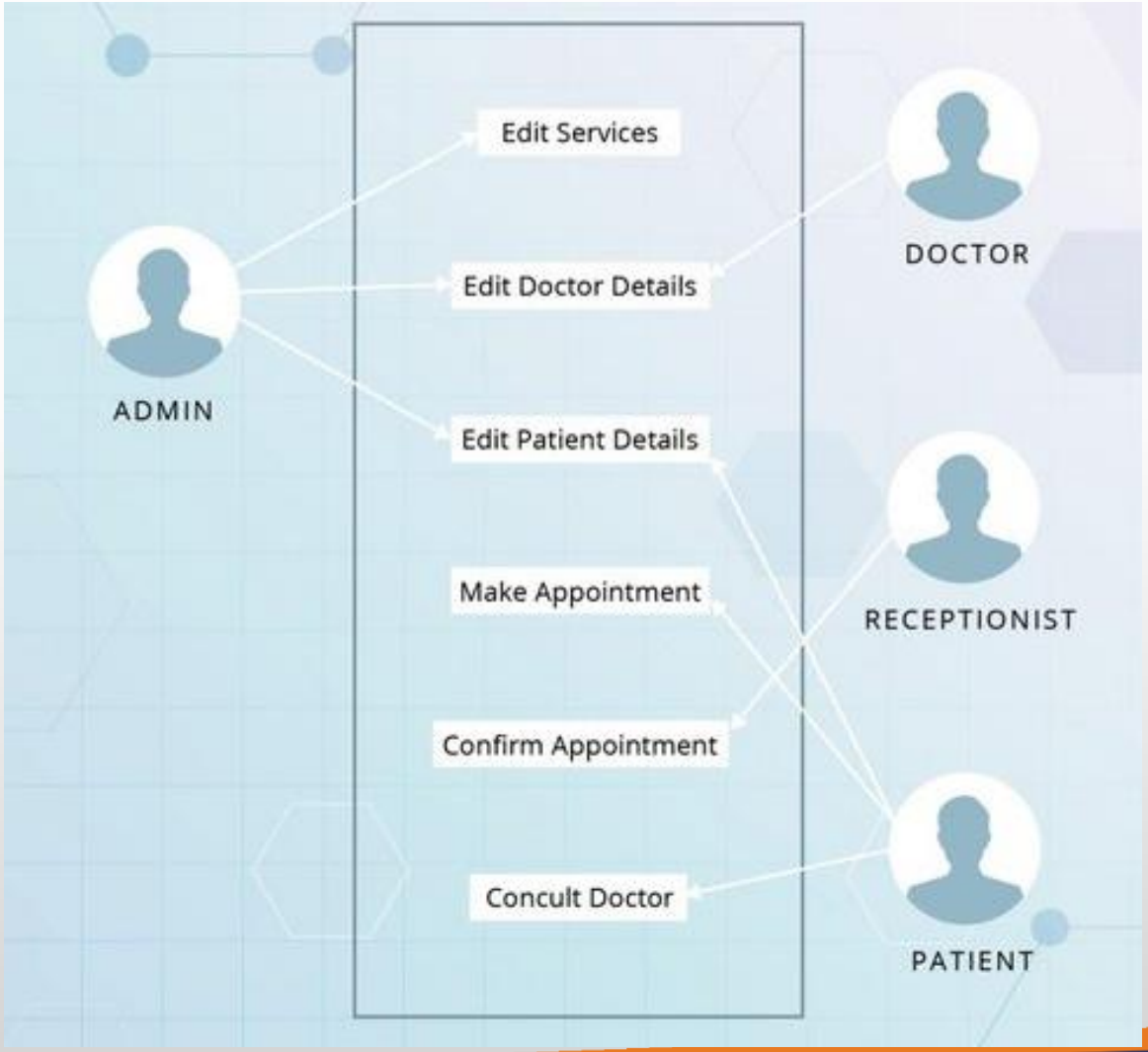
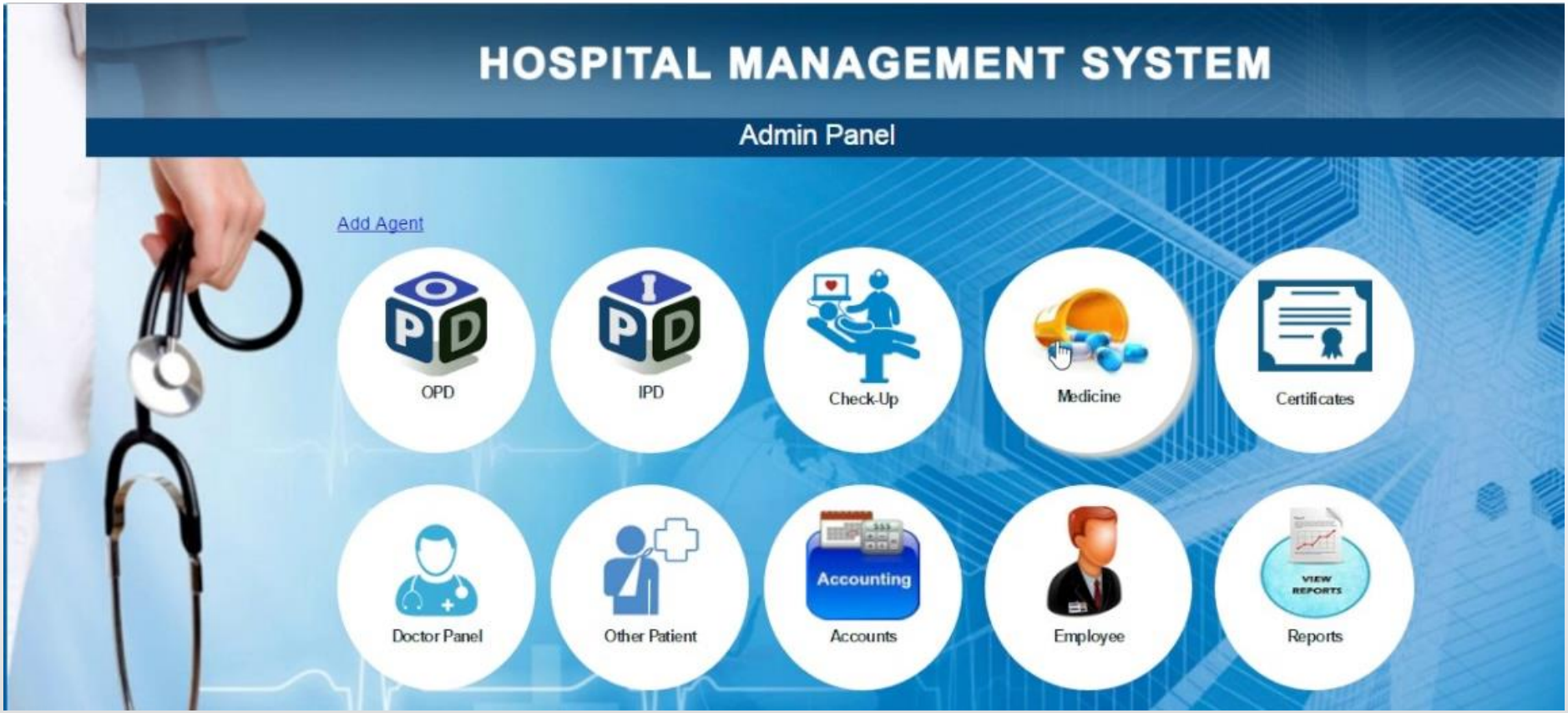
User Levels

- Identify who will going to use the system and what are the benefits from the system.



Sample Home Page

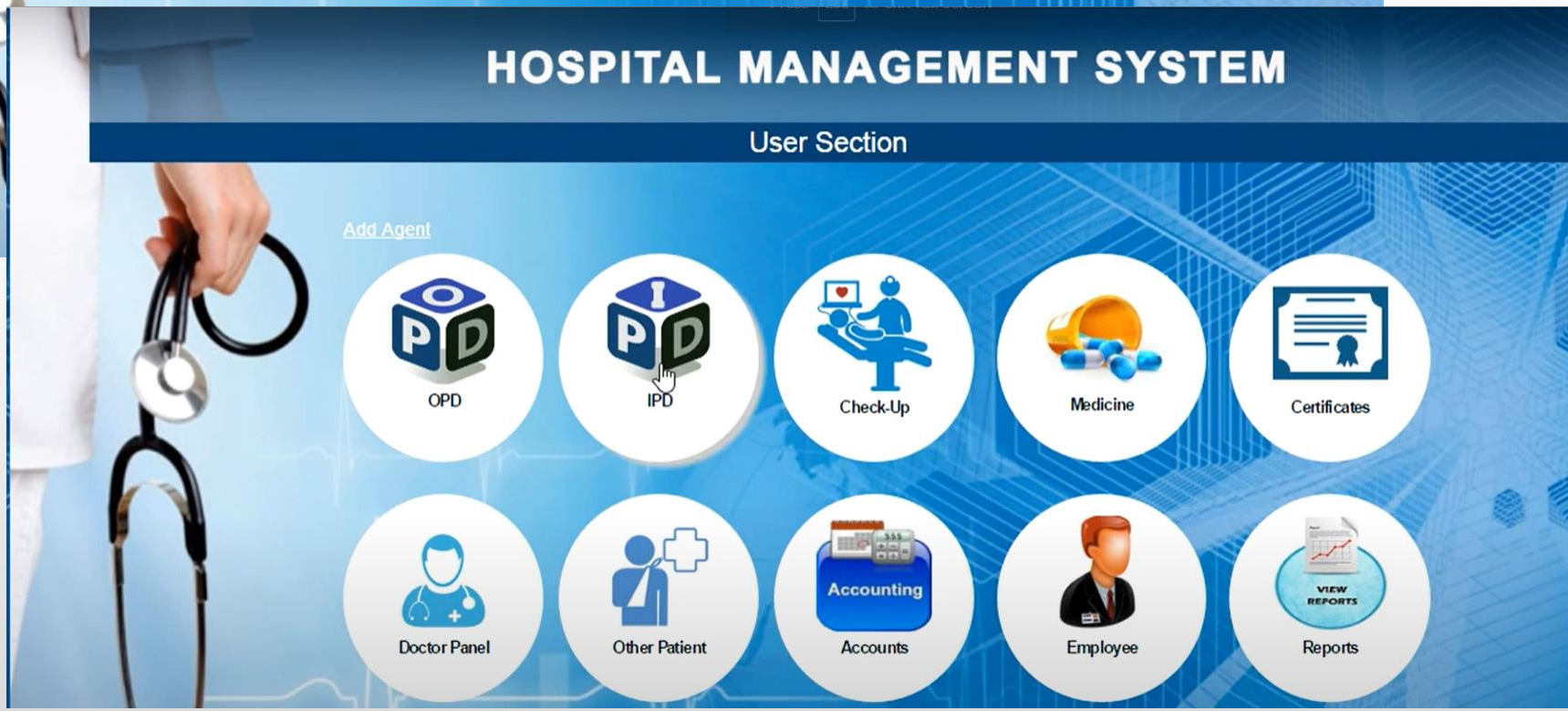


https://www.youtube.com/watch?v=ptaU2NvmqyU

HOSPITAL MANAGEMENT SYSTEM
Admin Section
Pathology
X-Ray
Ultra Sound
ECG

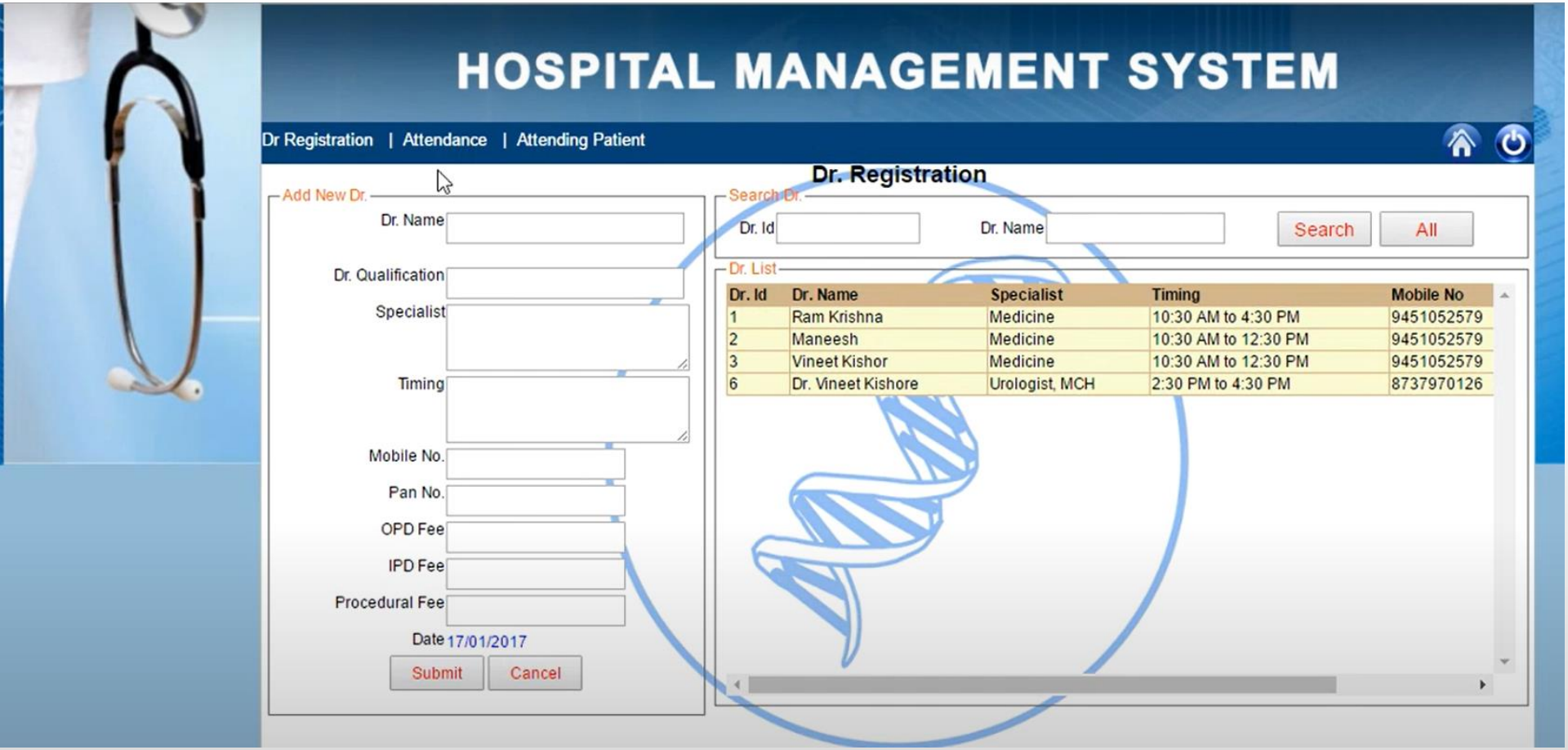
HOSPITAL MANAGEMENT SYSTEM
Medicine Department
Vendor Entry
Medicine Entry
INVOICES
Invoice
Medicine Sale
Medicine Return
Medicine Stock
Expiry Detail
Report

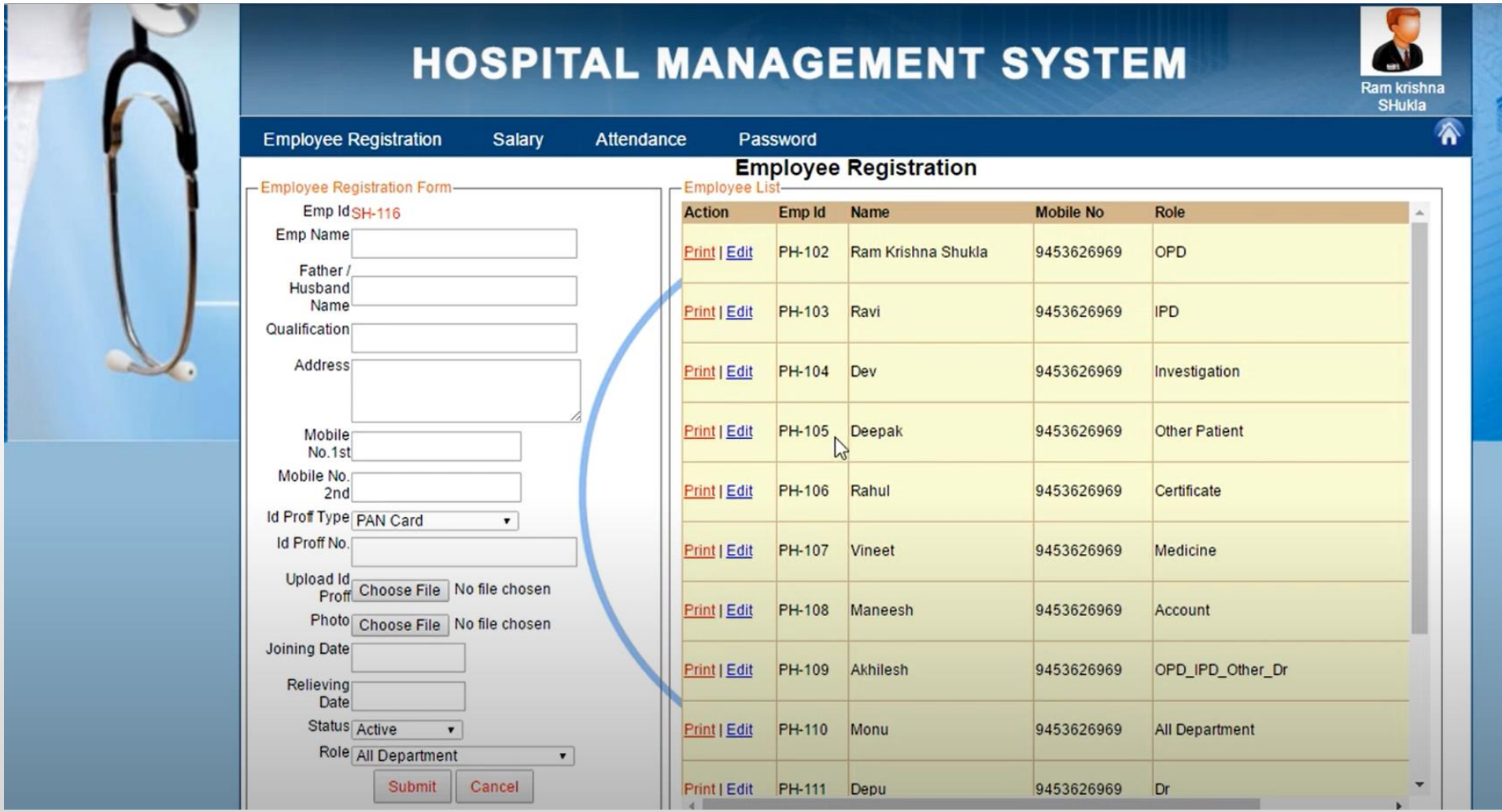
HOSPITAL MANAGEMENT SYSTEM
Certificates Section
Birth Certificate
Medical Certificate
Death Certificate


HOSPITAL MANAGEMENT SYSTEM
User Section
Add Agent
OPD
IPD
Check-Up
Medicine
Certificates
Doctor Panel
Other Patient
Accounting
Accounts
Employee
VIEW REPORTS
Reports

HOSPITAL MANAGEMENT SYSTEM
IPD List
Investigations
Investigations Payment
Other IPD
Ward Details
PayStatus
Payment
Dicharge Card
Ward Status
Genral Ward
Private Ward
ICU Ward
ICCU Ward
semi private
delux
Selected Ward Genral Ward
Select Room Room 1st
Total No of Bed 9
Bed No. : 1
Bed No. : 2
Bed No. : 3
Bed No. : 4
Bed No. : 5
Bed No. : 6
Bed No. : 7
Bed No. : 8
Bed No. : 10

Sample Form


HOSPITAL MANAGEMENT SYSTEM
Dr Registration | Attendance | Attending Patient
Dr. Registration
Add New Dr.
Dr. Name
Dr. Qualification
Specialist
Timing
Mobile No.
Pan No.
OPD Fee
IPD Fee
Procedural Fee
Date 17/01/2017
Submit
Cancel
Search Dr.
Dr. Id
Dr. Name
Search
All
Dr. List
Dr. Id | Dr. Name | Specialist | Timing | Mobile No
1 | Ram Krishna | Medicine | 10:30 AM to 4:30 PM | 9451052579
2 | Maneesh | Medicine | 10:30 AM to 12:30 PM | 9451052579
3 | Vineet Kishor | Medicine | 10:30 AM to 12:30 PM | 9451052579
6 | Dr. Vineet Kishore | Urologist, MCH | 2:30 PM to 4:30 PM | 8737970126


HOSPITAL MANAGEMENT SYSTEM
Ram krishna SHukla
Employee Registration
Salary
Attendance
Password
Employee Registration
Employee Registration Form
Emp Id SH-116
Emp Name
Father / Husband Name
Qualification
Address
Mobile No.1st
Mobile No. 2nd
Id Proff Type PAN Card
Id Proff No.
Upload Id Proff Choose File No file chosen
Photo Choose File No file chosen
Joining Date
Relieving Date
Status Active
Role All Department
Submit
Cancel
Employee List
Action | Emp Id | Name | Mobile No | Role
Print | Edit | PH-102 | Ram Krishna Shukla | 9453626969 | OPD
Print | Edit | PH-103 | Ravi | 9453626969 | IPD
Print | Edit | PH-104 | Dev | 9453626969 | Investigation
Print | Edit | PH-105 | Deepak | 9453626969 | Other Patient
Print | Edit | PH-106 | Rahul | 9453626969 | Certificate
Print | Edit | PH-107 | Vineet | 9453626969 | Medicine
Print | Edit | PH-108 | Maneesh | 9453626969 | Account
Print | Edit | PH-109 | Akhilesh | 9453626969 | OPD_IPD_Other_Dr
Print | Edit | PH-110 | Monu | 9453626969 | All Department
Print | Edit | PH-111 | Depu | 9453626969 | Dr

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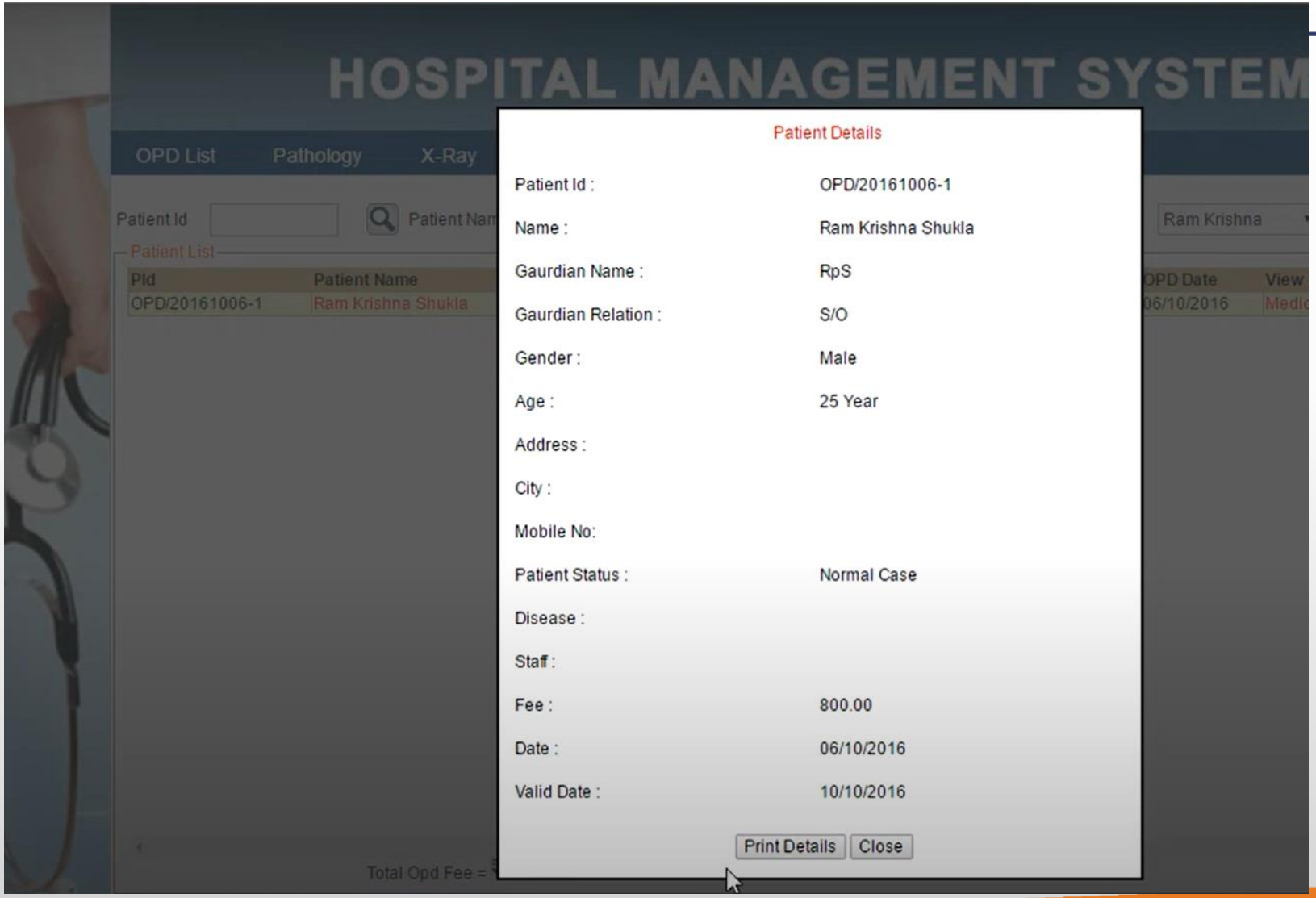
Sample Report



Any Questions ???