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**Introduction**

The thirst for learning, upgrading technical skills and applying the concepts in real life environment at a fast pace is what the industry demands from IT professionals today. However busy work schedules, far-flung locations, and unavailability of convenient time-slots pose as major barriers when it comes to applying the concepts into realism. And hence the need to look out for alternative means of implementation in the form of laddered approach.

The above truly pose as constraints especially for our students too! With their busy schedules, it is indeed difficult for our students to keep up with the genuine and constant need for integrated application which can be seen live especially so in the field of IT education where technology can change on the spur of a moment. *Well, technology does come to our rescue at such times!!*

Keeping the above in mind and in tune with our constant endeavour to use Technology in our training model, we at Aptech have thought of revolutionizing the way our students learn and implement the concepts using tools themselves by providing a *live and synchronous IProjects learning environment!*

**So what is this IProjects?**

IProjects is a step by step learning environment that closely simulates the classroom and Lab based learning environment into actual implementation. It is a project implementation at your fingertips!! An electronic, live juncture on the machine that allows you to

* Practice step by step i.e. laddered approach.
* Build a larger more robust application.
* Usage of certain utilities in applications designed by user.
* Single program to unified code leading to a complete application.
* Learn implementation of concepts in a phased manner.
* Enhance skills and add value.
* Work on real life projects.
* Give a real life scenario and help to create applications more complicated and useful.
* Mentoring through email support.

**How do we start accessing the Sample IProjects?**

The students at the centre are expected to complete this IProjects and send complete documentation with source code within the time allotted to

[iprojects@aptech-education.com.pk](mailto:iprojects@aptech-education.com.pk)

Looking forward to a positive response from your end!!

**Objectives of the project**

The Objective of this program is to give a sample project to work on real life projects. These applications help you build a larger more robust application.

The objective is not to teach you the software’s but to provide you with a real life scenario and help you create basic applications using the tools.

You can revise the topics before you start with the project.

These programs should be done in the Lab sessions with assistance of the faculty if required.

It is very essential that a student has a clear understanding of the subject.

Kindly get back @ [iprojects@aptech-education.com.pk](mailto:iprojects@aptech-education.com.pk) in case of any doubts regarding the application or its objectives.

**School Management System**

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**Introduction**

A School Management System is a large database system which can be used for managing school 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.

**Existing Scenario**

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. Managing student fee and employees pay slip was becoming difficult with the passage of time.

It has been difficult to search a record from thousands of such records and observed that students can take any person claiming that he/she is their parent or emergency person which creates problem in control of students.

**Proposed Scenario**

The proposed system should be user friendly, the retrieval and storing of data should be fast and data should be maintained efficiently. Moreover the graphical user interface should be provided in the proposed system, which provides user to deal with the system very easily.

The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers. Moreover work become very easy because there is no need to keep data on papers.

**Software Requirement**

* Visual studio 2012/2013 or higher
* Sql Server management studio 2012 or higher

**Proposed system**

* There should be 4 users using this application namely:-
  + Administration(Head of school/principal),
  + Teachers,
  + Admission/HR and
  + Accounts
* Create login for all above users. Make sure login is save from SQL Injections
* Administration Rights:-
  + Create other users.
  + Should be able to add/view/edit/delete student details
  + Should be able to add/view/edit/delete class/section/subjects information.
  + Should be able to view/edit/delete the employees details.
  + Should be able to view students and employees attendance.
  + Should be able to know to the income, expenditure and profit//loss from account.
  + Should be able to view the report.
    - Reporting includes:
      * List of all the registered students. Report must search through name, admission academic year, class, gender
      * List of all pass out/left student. Report must search through name, pass out/left student academic year, last class studied, result
      * List of all the current employees. Report must search though name, joining date with range, department, gender
      * List of all the ex-employees. Report must search though name, joining date with range, leaving date with range, department, gender
      * List of students who have paid fee. Generate monthly report, class wise report.
      * List of students who have not paid fee. Generate monthly report, class wise report.
      * List of employees pay report with such columns monthly, incentives, bonus, gross pay deduction and net pay.
      * List of all the present and absent students. Generate specific student report monthly report, class wise report, date range report, separately absent and present report(individual and class)
      * List of all the present and absent employees’ attendance. Generate monthly report, date range report
      * Should be able to view profit/loss monthly and yearly
* Teachers Right:-
  + Mark student attendance.
  + View classes assign to them.
  + View list of students assign to them.
  + List of all the present and absent students. Generate specific student report, monthly report, class wise report, and date range report, separately absent and present report (individual and class).
* Admission Rights:-
  + Should be able to add/view/edit/delete student details
  + Should be able to add/view/edit/delete class/section/subjects information.
  + Should be able to view/edit/delete the employees details.
* Accounts:-
  + Student fee payment.
    - Update student fee payment status to paid and unpaid
  + Employees pay slip include must monthly, incentives, bonus, gross pay deduction and net pay.
    - Release employees pay slip
  + Manage other school expenditures like inventory, utility bills
  + Generate report for profit and loss

**Standard plan:-**

* Use of try/catch
* Use of Object-oriented programming concepts
* Every code block must be comment
* Code optimization.
* The logic of the program needs to be explained. Proper documentation should be maintained.
* Complete Project Report along with synopsis, code and documentation should be prepared

Note: Don’t forget to take your data backup every day. This will save your project work from the following:

a. Virus problem

b. System failure

c. File corrupt

Data Backup is an important event to be done on regular basis in a project management.

**Documentation:**

No project is complete without documentation. In fact, it is one of the most important activities during the development of a project. The documentation of an ideal project will be in the form of a project report comprising of the following documents:

* Certificate of Completion.
* Table of Contents.
* Problem Definition.
* Customer Requirement Specification.
* Project Plan.
* E-R Diagrams.
* Algorithms.
* GUI Standards Document.
* Interface Design Document.
* Task Sheet.
* Project Review and Monitoring Report.
* Unit Testing Check List.
* Final Check List.

**Deliverables**

You need to submit the following Deliverables:

1. Hardbound Documentation of the project.
2. You need to follow all the following points as a part of your

IProjects execution process and will carry **10 marks** in the final IProjects Result.

a) Send us IProjects status mail, after 10 days interval from your IProjects start date.

b) The status mail should consist of description with review document (what's going on the project). Also you can send your doubts / clarification or any additional inputs required to complete your IProjects any time during the project planning and execution.

c) At the time of project submission also send us the feedback along with your documentation (soft and hard bound copy). The Feedback form is attached with this mail.

***Remember*** *that the subject of your email should start either with the word STATUS: or DOUBT: or PROJECT SUBMISSION: accordingly.*

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# Hardware/ Software Requirements

**Hardware**

1. A minimum computer system that will help you access all the tools in the courses is a Pentium 166 or better
2. 64 Megabytes of RAM or better
3. Windows 7,8 (or higher if possible)

**Software**

**Either or combination of the following Software’s are to be used:**

* **Visual studio C# sharp**
* **SQL Server (Database)**