Case Study:  Amazing Restaurant

The world-renowned curry chef Mr Amazing opened the Amazing Restaurant in 2017. The restaurant provides authentic dishes from the foothills of the Himalayas to the hot seas of the Indian Ocean.  The restaurant has a seating capacity for 300 customers.

The restaurant’s recent growth no longer makes it feasible to maintain customer, table booking, order and day-to-day activities using its manual systems. With the data stored in the database, management will be able to ensure that data are current and more accurate than in the present manual systems. In addition, Mr Amazing will be able to obtain answers to their questions concerning the data in the database easily and quickly, with the option of producing a variety of useful reports.

In lieu of this, Mr Amazing, has decided to contact your consultancy company to set up a database to deal with the day to day running of the business.  After careful investigation and analysis, your consultants realise that it is not all as calm as is first perceived.

The restaurant has a booking service where customers can book their tables beforehand and also book a certain table if they wish. Customers need to provide their title, full name (first and last), city and phone number. The staff checks if the customer is in the database and uses the existing record.

If the customer is booking for the first time, a new record is created.  When making the booking, the date, time, number of people that will dine in and table number (optional) information are requested. The name of the staff who took the booking must be recorded. Each booking has a default 2-hour timeslot, which can be changed in case the customer wants to stay longer.

Upon entering the establishment, customers need to speak to a receptionist, who checks whether they already have a booking. If the booking exists, the customers are taken to their table. If the customer does not have a booking, the receptionist checks the availability, if the customer is in the database and if there are tables to accommodate, the receptionist adds the booking for the customer before taking them to the table.

Once settled, customers then are served by a staff member who takes the orders.

Mr Amazing also wishes to publish a recipe book and because of this he needs to know what ingredients are needed in the different dishes. Mr Amazing also thinks that this would help in training new staff and if the chef leaves then he would not take all the knowledge away with them.

Specific Requirements:

In order to meet the business needs required to design the following database element: structure, indexes, queries and or reports

To ensure consistency of the data in the database you are required to develop data validation rules to ensure the correctness of data entered into the database table; identify referential Integrity constraint and database constraints.  Below is a list of checks you should implement:

1. Staff gender should be recorded as ‘M’ or ‘F’.
2. Ensure that every customer has a telephone number which is unique
3. Staff numbers should be generated automatically using a sequence.

* Design and develop database for amazing restaurant
* Design and implement Front end interface using java standard widget toolkit SWT for following:
  + User Login – must request username and password
  + Dashboard (users should only view the options according to their access level) – the dashboard should display the buttons for Booking, Table Assignment, Table Order, Total Bill and Create Staff (admin users only)
  + Make Booking – performs a table booking at the restaurant
  + Booking list – searches for bookings on a particular date, allows to edit the booking (amend dates and delete bookings)
  + Table assignment – assigns a table to the booking
  + Table order – GUI only
  + Total bill – GUI only
  + Create staff – only admin users will be able to access and create a new staff user.
  + Edit Staff - only admin users will be able to access and edit a staff user
* Connect the Java application to the database using JDBC

Time frame for the project completion is 2 months. Available budget is 20,000.

Students are asked to form groups of 3 -5 students – with one student acting as a Project manager. Your primary tasks are:

1. Prepare a Project Plan for design and develop database for amazing restaurant.
2. Design and implement Front end interface using java standard widget toolkit SWT
3. Test the application
4. Prepare a full report that consists of all given information. Compile the answers to the given tasks, and format them with project report template.
5. Prepare a power point presentation. Each group is to give 5 minutes presentation on their plans.

The assumed milestones are:

* You will gather data/information about the business and perform requirement modelling.
* You will translate the business requirements into technical specifications.
* You will present your project plan to the management for final approval prior to implementation.
* You will maintain and monitor the amazing restaurant system.

The assumed requirements are:

* You will plan for designing an interface for administration, staff and customers.
* You will plan for building amazing restaurant database system using either MySQL or MS-ACCESS or other tools of your choice.
* You will plan for building online interface and access point (with login facilities)

We assume that you have gathered all relevant information from previous assessments.

Complete all given tasks.

Task 1. Visit the link and read what Project governance is and follow its processes to confirm Amazing Restaurant Governance Policy? (<https://www.pmi.org/learning/library/project-governance-critical-success-9945>) and Confirm business problem or opportunity and project objectives according to organisational needs

Task 2. Identify the Scope, Time, and Cost constraints for the Amazing Restaurant project. Develop project charter and obtain sign-off. (See appendix A)

Task 3. Conduct Feasibility Study and outline if the project is technically and operationally feasible?

Task 4. Use your information-gathering techniques to collect more information about the project. Search for competitors (Other education providers) and find their services.

Which type of questions is more appropriate (e.g. open ended, closed ended, range of answers)?

Prepare short interview questions to ask the director of Amazing Restaurant. Ensure the interview questions are of high standard.

Task 5. Define System Development Life Cycle (SDLC) in your own words. Describe how different phases of SDLC may be applied in your project.

Task 6. Prepare project work breakdown and schedule for your project. (See Appendix B)

Task 7. Build and present Gantt chart to your trainer.

(Note- You can simply use online Smartsheet with the following link to create Gantt chart easily. <https://www.smartsheet.com/gantt-chart-software>

OR

You can use Excel, MS Project or any other open-source software available on your Desktop.)

Task 8. Prepare necessary documents of project management plan by following standard protocols to get approval from appropriate person.

Task 9. Identify and select the team members (including the manager).

Create a table that shows the team members, their roles and responsibilities. (See appendix C)

Task 10. Determine and discuss training and support needs of your client.

Task 11. Determine teams’ values and expected behaviours for project teams members.

(go to this link : <https://www.pmi.org/learning/library/project-team-performance-expected-behaviors-6759>) and Document team members, role allocation, training and submit to seek feedback from required personnel.

Task 12. Monitor delivery of the project by evaluating results of team member’s efforts and manage each individual of the team.

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| --- | --- | --- |
| Team members | Team member’s assigned tasks | Project delivery |
|  |  |  |

Task 13. Monitor and control the quality of project deliverables against the requirements.

|  |  |  |
| --- | --- | --- |
| Project deliverables | Requirements | Need Change? |
|  |  |  |

Task 14. When the deliverables change during the project the current budget and deadlines are adjusted to reflect the additional work.

(a)Amazing restaurant decided to put their system on Cloud with full backup services.

(b)Identify the cost and additional requirements to accommodate the above changes.

(c)Monitor and control project scope changes, risks, and issues.

Task 15. Test the functionality of Database (Amazing Restaurant) by following testing protocols to meet requirements and hand over to amazing restaurant staff.

Task 16. Prepare IT support plans and support documents for Amazing restaurant database.

Task 17. Prepare project closure by following tasks:

(A) Obtain final project Sign-off with required personnel

(B) Conduct post project review and document lessons learned

(C) Review and update disaster recovery plan

(D)Close the project by proper document signing with appropriate person

Task 18. What could be the possible risk? Create Risk Management plan for your project. (See appendix D)