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INFORMATION TECHNOLOGY FOR CLASS 12

(Study materials)

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UNIT – 2 : OPERATING WEB

In the last chapter I told you to information about how the database and web application is connected to the Internet and what is the function of the Backend and Frontend, and its testing phase

CASE STUDY – ONLINE GAME:

First of all let us define the problem statement for the online game. It is a simple guessing game where a player has to guess the word which may belong to a category like movie or country. Let us create this game.

Problem statement: Hangman is a popular world level game. In this game, a player selects a category like country, capitals, animals, birds and movie names. This game gives seven chances for guessing to a user. Game displays some number of blanks to the player.

1. **Requirement Definition:** The problem statement is identified.
 - ❖ **Feasibility:-** The student are encouraged to discuss in group and identify the technical requirements for this project Evaluate whether it is feasible to implement within the scope of resources available in school. The following steps are based on the assumption that the project is feasible.
 - ❖ **Scope:** The application must do the following:
 - a) Ask the player to select a category.
 - b) The game selects a word from that category randomly and displays the appropriate number of dashes and spaces to represent the phrase(depending on the number of letters in the word)
 - c) The player makes guesses. The guess is either a hit(Success) or a miss(Fail). If it is a success, the letter is written in the dash appropriately. The program should allow the user to make a total of seven guesses
2. **Design:**
 - ❖ **A Map of the web Application Site :** The student are encouraged to design structure of the sets by identifying the pages for this site. Determination of relationships between these pages will be crucial in design of website, for example, a page will be designed for front end interface containing leads to other pages. Implementation will follow this design structure.

❖ **Database:** It is decided to create the following tables in the databases, along with the attributes of the tables. Their data types, the sizes of the column in the tables:

- Category
- Words_in_Category

TABLE: CATEGORY

S.No.	Name	Type	Remarks
1.	Category_Id	Varchar(10)	Unique id for each category
2.	Category_Name	Varchar(20)	Name of the category

TABLE: Words in _category

S.No.	Name	Type	Remarks
1.	Category_Id	Varchar(10)	Unique id for each category
2.	Word	Varchar(15)	Words for the category

❖ **Page structure:** Design the structure of page. It is found that the inputs required from the user are as follows:

- Selection of category for the game
- Guessing the letters

The following front-end interface can be designed.

Select Category for the

Countries
Animals
Fruits
Vegetables
Capitals

Word A _____
Guess S
Misses H.T

Guess
Misses

3. **Implementation:** Create backend databases, frontend, and the connectivity between them.
4. **Test:** You have implement the complete application, test the application with random data. Test each feature and functionally of the application. Fix the bugs/error, if found and retest.

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