Assignment Overview

In this assignment, you work in groups. The preferred number of students in the group is two, the number may go up to three students in some cases.

Each group is required to choose a business scenario of a selected business and develop an information system to support it. The business scenario can be of a company, department, shop or any other business activity that your teacher approves. Examples are: car rental system, gym membership system, games rental system, and others.

Each group need to use both Microsoft Excel and Microsoft Word to present their system. The group must use Microsoft Excel to develop a small **Information System (IS) for the business scenario** in the form of an Excel spreadsheet and use Microsoft Word to write a short report to explain the chosen business scenario and developed information system.

Each group is also expected to identify the different components of its Information System (IS). This includes:

* Hardware
* Software
* Data
* Network (where appropriate)
* Procedures
* People

The created Excel spreadsheet is intended to enable the IS users to collect data, process data to information and display output.

General information about the Information System (IS)

1. Application used:

Each group is required to use Microsoft Excel 2010 or higher to build their simple IS. The group needs to create one spreadsheet that contains a minimum number of four (4) worksheets (start page (homepage) and 3 other worksheets).

1. What functionalities do each group needs to add to the IS?

Each group is free to choose the type of business he/she sees suitable. Students need to make sure that the developed IS addresses a problem and provides a proper solution.

1. What kind of input end users are expected to enter into the information system?

This is related to the chosen (or assigned) business scenario. Information systems have different types of input.

1. What kind of processing needs to be executed in the Information system?

The developed Information System must include procedures that perform the required calculations (processing).

1. What kind of output end users are expected to get out of the information system?

The output expected from each developed Information Systems depends on both the input and the functionalities that the Information System provides.

Phases of Building the Information System

# Creating a report *“Planning”*

**Each group is requested to create an MS report and name it for example (**Group2\_Rpt\_Bus\_Booking\_System.docx**). The report should contain the following information:**

## **Name of the Information System (IS)**

Each group should choose a name of the IS. The name must reflect the main functionality of the developed IS.

## **General Purpose of the IS**

Each group needs to give a brief description of the purpose of the IS. This must list the advantages of using this IS. It is advisable to use the following questions as your guide:

**What problems my system help to solve?**

**What are the functions of the IS that relate to the business scenario?**

## **A List of the IS components -** *See the PowerPoint presentation for Week 1.* **This includes:**

* What **hardware** is needed to run your IS,
* **Software** “This is basically the system you are developing”
* What **data** are needed to be entered into your IS? What **Information** is expected to result from your system (Output)?
* What are the **procedures** used in your IS (What does your IS do)?
* Is a **network** needed for your IS to function? If yes, how is it implemented?
* What is the role of **People** in your IS?

This can be illustrated in paragraphs or diagrams. It is up to each group to choose the method of presenting its understanding of each of the above components.

## **Spreadsheet structure**

Each group should list the worksheet names with one or more paragraphs that describe the purpose of each worksheet.

## **A List of the functionalities the proposed IS will provide**

This include, but is not limited to:

* Data entry validation
* Sum and Maximum values
* Average and Minimum values
* Proper Formatting (font and background colors, font sizes, professionalism)
* Conditional Formatting
* If Statements (where appropriate)
* VLookup
* Sorting
* Filtering
* Referencing from the same sheet and also referencing between different sheets
* Chart (any chart type that reflects the business scenario. Example – pie, line, scattered, column, etc.)
* Reports (you may use subtotals)

Screenshots of the worksheets.

# Building the Information System (IS) *“Implementation”*

**Each group is required to do the following:**

## **Create an Excel Spreadsheet**

Create a Spreadsheet using your Group# followed by the IS name you listed in your report (**Name the file for example**: Group#2\_IS\_Bus\_Booking\_System.xlsx). This spreadsheet represents one of the important components of the developed Information System. It is the “Software” part.

## **Create the required worksheets**

**Each group must use:**

* An appropriate name for each worksheet. This name must be related to the intended purpose of the worksheet.
* A variety of functions, formulas, and other Excel tools that perform the required processing of the IS.
* Appropriate referencing methods within and between worksheets.
* An appropriate way to display the results (Output) of the IS.
* Create a chart that represents the data in an easy way to analyze and understand.
* Following are some examples:
  + **Example1:**
    - Create a list of students in a section, this includes their names, gender, age, city, English mark, Math mark, Computer mark, …etc
    - Use some calculations to get the Max, Min, Average, …etc
    - Use proper formatting of each one of the listed values (%, Currency, Decimal, Date, …)
    - Use an IF statement or a VLookup function to calculate the grade of each one of the listed students.
    - Add a column for community service hours
    - Use an IF statement to show a message in front of each one of the student records based on their marks.   
      **For example:**
      * The text “Passed Courses” will be added in front of the record of those who got 60% or more.
      * Otherwise, the Information System will add “Failed” as the message.
* For those students who passed, use an IF statement to check if they completed the community service hours then show a message: “Congratulations you are entitled to graduate”
  + - Sort the student records based on one or more of the fields. Sort by their marks, names, cities …etc.
    - Generate a report and a chart to show the total number of students who are entitled to graduate.
  + **Example 2:**
    - Create a list of products that contains product names, prices, cost, brand, description, …etc
    - Create another list in another worksheet that shows the quantity sold in each month. This must be based on the data listed in the first sheet (This can be done using references to other sheets).
    - Calculate some values like:
      * Discounts (based on a specific discount rate)
      * Price After discount
      * Gross Income
      * Total Income
      * Average Month Sales
      * Total Month Sales
      * Highest Sales
      * Lowest Sales
    - Create a chart that shows sales in each month
    - …etc

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| **Note: Groups should not use the examples given above as their actual IS project. The examples are to give groups insight of what type of activities the IS might perform.** |

Note: After you finish both the MS report and the Excel project files, create a folder with a sample format (CIS1003\_AT2\_AliSalem\_AbdullaSaif\_OmarSultan). Then save both project files to folder and compress to a zipped file and submit to BB Learn as directed by your class teacher.

# Testing the Information System (IS) *“Testing”*

## Each group is required to test the IS by entering some values and checking if the system produces the expected results.

## A screenshot of the worksheets of the IS can be added to the report to show how the IS works.

***Before submitting your assignment, make sure that the following items are ready:***

|  |
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| ***(1) The Planning Report:***  ***(2) The Excel Spreadsheet:*** |

# Marking Scheme (Assessment Rubrics)

**Group#: Student-1 ID: \_\_ Student-2 ID: \_\_**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Information | Marks available | Marks Awarded |
| Phase 1  Planning Report  (15 marks) | **Planning – Microsoft Word Report** |  |  |
| **1.1** | * Name of the Information System (IS) | 1 |  |
| **1.2** | * General Purpose of the IS. What problems does the IS solve? | 2 |  |
| * Explanation of the solution worked | 1 |
| **1.3** | * A List of the Information System (IS) components & example *(1.5 marks each)* | 9 |  |
| **1.4** | * A list of the worksheet names * worksheet purpose or function | 6 |  |
| **1.5** | * . Screenshot of worksheet structure | 1 |  |
| * A list of functions used and explanation of why used | 6 |
|  | * Report Coversheet | 2 |  |
|  | * Report Grammar and Spelling | 2 |  |
|  | TOTAL REPORT | **30** |  |
|  |  |  |  |
| Phase 2  Excel Spreadsheet  (20 Marks) | **Creating the Spreadsheet** |  |  |
|  | * Suitable Microsoft Excel spreadsheet file Name  Suitable Worksheets names | 2  2 |  |
|  | * Worksheets are professionally formatted -color  -fonts  -alignment | 2  2  2 |  |
| **Functions and Other Features** | |  |  |
| **Formula 1** | * Formula works | 2 |  |
| * Test for valid data (validation) Test for maximum data * Test for minimum data * If statemen | 2  1  1  2 |
| **Formula 2** | * Formula works | 2 |  |
| * Test for valid data (validation) Test for maximum data * Test for minimum data * Vlookup | 2  1  1  2 |
| **Formula 3** | * Formula works | 2 |  |
| * Test for valid data (validation) Test for maximum data * Test for minimum data * Any other advanced Excel formula statement | 2  1  1  2 |
| **Features/ Functions** | * Conditional formatting * Sorting * Filtering * Referencing other sheets | 2  2  2  2 |  |
| **Charts and Reports** | |  |  |
|  | One (Bar, Pie, Line, etc.) Chart   * Chart - Title * Chart - labels * Chart - Numbers/% displayed * Chart - Data updatable   Report with subtotals | 1  1  1  1  4 |  |
|  |  |  |  |
|  | TOTAL SPEADSHEET | **50** |  |
|  | GRAND TOTAL of GROUP WORK | **80** |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Individual Interview Rubric | | | | |
| No. | Criteria | Max marks | Student1 | Student 2 |
| 1 | Introduced topic clearly | 3 |  |  |
| 2 | **Explained at least one function** | **4** |  |  |
| 3 | Understood the component of the IS in the system developed | 3 |  |  |
| 4 | **Answered questions** | **10** |  |  |
|  |  |  |  |  |
|  | TOTAL | **20** |  |  |
|  | Percentage % |  |  |  |
|  | **Teachers Comments:**  Student 1:  Student 2: | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Total Practical Assignment Marks | | | | |
| No. | **Item** | **Max marks** | **Student1** | **Student 2** |
| 1 | Group Marks | 80 |  |  |
| 2 | Interview Individual Marks  **(Mark from the interview rubric divided by 5)** | 20 |  |  |
|  | **TOTAL** | **100** |  |  |
|  | Percentage % | **25%** |  |  |
|  | Teachers Comments: | | | |