Decision Support System

Name	ID
Ahmed Ashraf Mohamed	2103134
Shahd Ahmed Taher	20201447207

1 System Request

Project Sponsor: Mid and higher management.

Business Need:
- Support business and organizations decision making activities
- Make informed decision based on analyzed data of a less well structured, under-specified problems.
- Analysis of data to assist in decision-making
- Evaluate Specific operation
- Provide guidance on establishing supply chain movement, and sales

Business Requirement:

- Data management:

  - Organization's information
  - External information

- Produce reports that may project revenue, sales, market share, ... etc

- Interactive software-based system to help decision maker use the information.

- Present the data in a useful manner

- Model management

- Knowledge management

Business Value:

- By making good decision it might increase profits and market share of the company.

- Makes workflow more efficient

  - reducing time needed
  - avoiding errors

- Planning and management

  - ensures management success

- Determines potential outcomes

  - Evaluating past data
  - Examining current trends or information

---

2 Feasibility Study

2.1 Technical

- Experience Engineers

- Hardware

  - When it comes to hardware and computing power there are two options
    * Internal: where internal servers and data centers are used. This add overhead costs
    * External: where cloud computing is used which can offer flexibility, and the ability to scale the system.
      · But in case of sensitive data an internal data center is preferred

The chosen hardware for our system is going to a cloud server

2.2 Economic

- Since we have chosen a cloud server this reduces our overhead costs

- A conservative budget of the system is around 50,000 threshold

  - Where the 50,000 threshold is the minimum and 240,000 is the maximum

- reduction of time needed to make a decision by at lease 25%

- Reduction of errors by at lease 50%

- increase management success

- Improve planning of department

- A project increase in market share by 1%

- Improve the workflow

- Improve the operation processes

- Production of reports that contain a summary of our data that can be used to make informed decisions

- Produce projection of the current state of the organization

2.3 Operation

- since our users are going to be the managers, the interface of the interactive software is going to be kept simple and clean.

- Fast reports that can reach the management and improve the management process

- Can reduce the time by the managers needed to make decisions as well as visualizing the data

2.4   Schedule

- Time Estimation:

    - Minimum time needed for all the process is about 6.5 months
    - Such a Schedule might be extremely strict and result in rescheduling so, another Estimation is given where the project is going to done in about 1.3 year
    - Planning: 30 Days
    - Analysis: 48 Days
    - Design: 58 Days
    - Implementation: 58 Days

3   Project Methodology

The chose methodology for our system is the *Waterfall method*