# Unit 3 Assignment: Practice Exercises

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BU 624-7 Systems Analysis and Design

I.  Break Even Analysis (10 points)

Assume you are put in charge of launching a new website for a local nonprofit organization.

* What costs would you need to account for?
  + Creating and supporting the website.
* Make a list of expected costs and benefits for the project. You don’t need to list values, just sources of expense.
  + Domain name registration
  + Web hosting
  + Web Developer
  + Support contract
* Create numeric cost estimates for each of the costs you listed, you are free to make up numbers.
  + Domain name registration $30 annually
  + Web hosting $480 annually
  + Web Developer $500
  + Support contract $1200 annually
* Calculate the net present value and return on investment.
  + Present Value = Future Value / (1 + Interest rate) exponentially by the number of periods
  + PV = FV/(1+I)^n
* Include a break-even analysis. Assume a 10 percent discount rate and a five-year time horizon.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Net Present Value** |  |  |  |  |  |
|  |  |  |  |  |  |
| **Undiscounted Value** | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 |
|  |  |  |  |  |  |
| **Year** | 1 | 2 | 3 | 4 | 5 |
|  |  |  |  |  |  |
| **Discount Rate** | 10% | 10% | 10% | 10% | 10% |
|  |  |  |  |  |  |
| **Future Value** | $ 1,000.00 | $ 2,000.00 | $ 3,000.00 | $ 4,000.00 | $ 5,000.00 |
|  |  |  |  |  |  |
| **Present Value** | $ 909.09 | $ 1,652.89 | $ 2,253.94 | $ 2,732.05 | $ 3,104.61 |
|  |  |  |  |  |  |
| **Net Present Value** | $ 10,652.59 |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Income** | $ 1,000.00 | $ 2,000.00 | $ 3,000.00 | $ 4,000.00 | $ 5,000.00 |
| **Invested Capital** | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 | $ 2,210.00 |
| **Return on Investment** | 45% | 90% | 136% | 181% | 226% |

II.  Project Scope Statements (15 points)

**Atlanta Bicycle Riders** Prepared by: Amon-ra

**Project Scope Statement** Date: January 25, 2020

**General Project Information**

**Project Name:** Atlanta Bicycle Riders Website

**Sponsor:** Jack Johnson, Sr Director I.T

**Project Manager:** Presley Wright

**Problem/Opportunity Statement:**

The company lacks an online presence. This has created a loss of revenue from potential new members and potential event participants and sponsors.

**Project Objectives:**

Provide online advertisement for the company via a web presence. Create a convenient avenue for people of interest to enroll in member and events.

**Project Description:**

The website will provide general information about the company including membership fees. Visitors of the website will be able to join Atlanta Bicycle Riders through the site and pay dues. A events calendar will contain all upcoming events and allow willing sponsors and participants to become involved.

**Business Benefits:**

Convenience

Improved Advertisement

Increased Revenue

**Project Deliverables:**

Company Website

Orientation

**Estimated Project Duration:**

5 Weeks

III. Interview preparation (25 points total -- complete both tasks below)

TASK A:  Write a one-page essay summarizing the special interviewing and group problems that arise in such group sessions and suggest ways that you, as a group interviewer or group facilitator, might deal with these problems.

Joint Application Development (JAD) involves end users in the system development process. This model was created by Dr. Chuck Morris and Dr. Tony Crawford of IBM. Although end users are involved in the development process it needs to be the correct set of end-users. Junior members of a team may not have the proper insight to participate in the process and offer inaccurate information. Junior members may also be unprepared due to the lack of experience and therefore may provide too little information. The JAD technique requires more seasoned stakeholders from which to gather information from in order to accurately gauge the requirements.

During the group interview process, some end-users may be reluctant to speak in front of a group. At the opposite end of the spectrum, there may be some members of the group that dominate the sessions and very vocal. Such interactions or lack therefore defeats the purpose of Joint Application Development. Facilitators the group sessions should institute a method that allows everyone to provide input. When questions are posed to end-users, a round-robin method of interaction can be incorporated. This would place a mandatory response from those that are reluctant to speak and prevent more aggressive end-users from take-over the group.

JAD is time consuming. The technique involves a group of people and allowing them all to speak takes time. While no scheduling is foolproof, structuring how will be used and dividing the time accordingly can be helpful in creating some boundaries. Additionally, limiting the number of people involved can also be to facilitator advantage.

TASK B:  Adapt the following interview guide to create a new template suitable for a group interview. The new “group interview outline” should be no more than one page.

Interview Outline

Group Interviewed: Facilitator:

Department being Interviewed Name of Interviewer

Location: Appointment Date

Start Time:

End Time:

Objectives: Reminders:

Agenda: Approximate Time:

Introduction 1 minute

Backgroupnd on Project 2 minutes

Overview of Interview

Topics to be covered 1 minute

Permission to Record

Topics 1 Questions 5 minutes each

Round Robin response time

Topics 2 Questions 5 minutes each

Round Robin response time (opposite direction)

…. ….

Summary of Major Points 2 minutes

Questions from the Group 5 minutes each

Round Robin

Closing

General Observations:

Unresolved Issues, Topics not Covered:

Group Interviewed: Date:

Questions: Notes

Question: 1 Answer

1.

2.

3.

Observations:

1.

2.

3.

## References

## Kuchmistaya, S. B. (2001, November 26). INCORPORATION OF JOINT APPLICATION DESIGN (JAD) IN SYSTEMS REQUIREMENT DETERMINATION. Retrieved from https://www.umsl.edu/~sauterv/analysis/488\_f01\_papers/kuchmistaya.htm

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