Tutorial 1 – Answer key – Dec 18, 2021

**1.**

**Stake holders : librarian, users, developer of the system**

**Objective : To Implement a computer based public library system for loaning books.**

**Success: is measure in terms of rate of errors, user friendliness( directly proportional to**

**number of users who use the system over a given period) etc**

2.

**Payroll package doesn’t integerate with some databases. Installation becomes problem for some customers who are using those database.**

**Government makes statutory changes to the way the payroll applications are operated, this could be in relation to taxation, making the acquired payroll software reductant.**

**It is difficult to retain administrative staff to one payroll - the leads to additional cost in recruitment and increased salaries to retain staff.**

3.

a. Mozilla Firefox: Information

b. SAP: Information

c. Microsoft Access: Information

d. MP3 player: Embedded

e. Android: Embedded

f. GPS: Embedded

4.

Brief on who is within and outside organization and why

· Retail customers

· Corporate Customers

· RBI

· SEBI

· Bank manager

· Bank officers

· Bank cashiers and tellers

5.

1. Overtime of software engineers: Developmental cost
2. Microsoft Windows license for all computers in the company: Setup costs
3. Taxi bill for going on-site to customer premises for analysis: Operational cost
4. Arduino boards for an embedded project: Developmental cost
5. Kaspersky anti-virus software: Setup costs
6. Hotel accommodation for system analyst to visit customer premises: Operational cost

6.

Explain with following points

* Invisibility
* Complexity
* Conformity
* Flexibility

7.

People risk: Attrition, lack of training

Technology risk: Incompatible hardware and software, porting issues, version control

8.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Project A | Project B | Project C | Project D |
| Net Profit | 60,000 | 1,50,000 | 30,000 | 45,000 |
| Payback period | 5 | 5 | 4 | 5 |
| ROI | 12% | 3% | 6% | 7.5% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Discount factor @10% | A | B | C | D |
|  | 1.0000 | -100,000 | -1,000,000 | -100,000 | -120,000 |
|  | 0.9091 | 9091 | 181,820 | 27,273 | 27,273 |
|  | 0.8264 | 8264 | 165,280 | 24,792 | 24,792 |
|  | 0.7513 | 15026 | 150,260 | 22,539 | 15,026 |
|  | 0.6830 | 13660 | 136, 600 | 13,660 | 17,075 |
|  | 0.6209 | 62090 | 217,315 | 62,090 | 31,045 |
| NPV |  | 8131 | -148,725 | 50354 | -4789 |

NPV for Project C is highest. So we prefer Project C. Payback period is also lowest