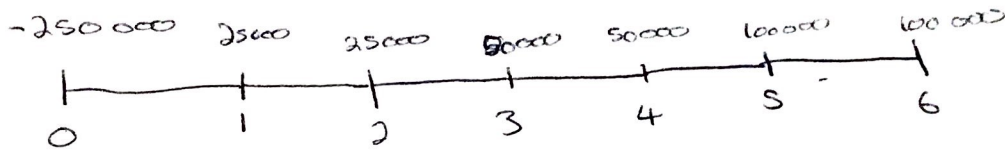


## Question 4

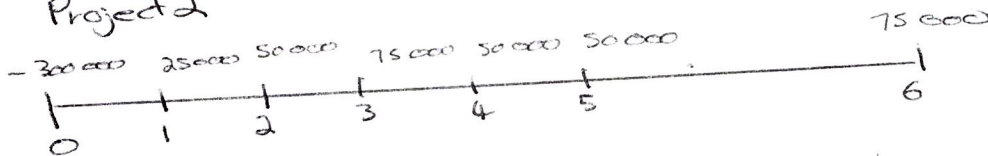
### 4.1) Project 1



$$PV = \frac{C}{(1+r)^t}$$

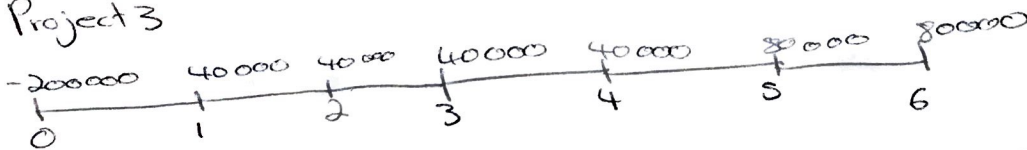
$$\begin{aligned} NPV &= -250,000 + \frac{25,000}{(1+0.08)^1} + \frac{25,000}{(1+0.08)^2} + \frac{50,000}{(1+0.08)^3} + \frac{50,000}{(1+0.08)^4} + \frac{100,000}{(1+0.08)^5} + \frac{100,000}{(1+0.08)^6} \\ &= -250,000 + 23,148 + 21,433 + 39,691 + 36,751 + 68,058 + 63,014 \\ &= \del{20,948} - 34,653 \end{aligned}$$

### Project 2



$$\begin{aligned} NPV &= -300,000 + \frac{25,000}{(1.08)^1} + \frac{50,000}{(1.08)^2} + \frac{75,000}{(1.08)^3} + \frac{50,000}{(1.08)^4} + \frac{50,000}{(1.08)^5} + \frac{75,000}{(1.08)^6} \\ &= -300,000 + 23,148 + 42,867 + 59,537 + 36,751 + 34,029 + 47,263 \\ &= -56,405 \end{aligned}$$

### Project 3



$$\begin{aligned} NPV &= -200,000 + \frac{40,000}{1.08^1} + \frac{40,000}{1.08^2} + \frac{40,000}{1.08^3} + \frac{40,000}{1.08^4} + \frac{80,000}{1.08^5} + \frac{80,000}{1.08^6} \\ &= -200,000 + 37,037 + 34,294 + 31,753 + 29,140 + 54,447 + 50,414 \\ &= 37,340 \end{aligned}$$

### 4.2)

Any of them, NPV  $\rightarrow$  0

Project 3 Because the NPV is greater than zero.

## Question 5

5.1) Four different approaches or models of Software development

□ The waterfall model

- works in a top-down sequence of activities
- Advantage is that it has a limited scope of iterations
- where the system requirements are understood, it's perfect

□ The spiral model

Similar to the waterfall model but differs in a sense that at the end of each step, we need to commit before moving on.

□ Incremental delivery

- Breaks the app down into small components which are then implemented and delivered in sequence.

Advantages

- Feedback from early increments improve the later stages
- Users get benefits earlier than with conventional approach

Disadvantages

- Later increments might require modifications to earlier increments

5.2) Software prototyping

- because this is one method in which users can be actively involved through and learn by doing.
- It also has an improved communication between parties involved

# Question 6

