1. Our company has received an offer to develop a new fraud detection system for a bank with the following project details:
   - Duration: 6 months
   - Development costs including the month of Go-Live: 200k/month
   - Installation costs for Go-Live: 150k
   - Maintenance costs after the month of Go-Live: 50k/month

   The Go-Live of the project is expected in Month 3 and the contract worth of $1M sets out the following payments:
   - 20% payment at the project start
   - 30% payment at the end of Month 3 (Go-Live)
   - 50% at the end of Month 6 (Project End)

   Draw up the cash flow and calculate the financial needs over time of the project, if any. Should we sign the contract? Justify your answer.

2. Briefly describe 5 different types of intellectual property and discuss their relevance for software companies.

3. Briefly describe the Maslow’s Hierarchy of needs and discuss the relevance of the theory when managing employees.

4. With the raise of online collaboration software such as GitHub, the problems of co-ordination in large software projects are less eminent than 15 years ago. Discuss.

5. Outline the stages of group formation and discuss the respective challenges for start-ups.

6. Pick four products, one for each of the four product (life cycle) stages. Justify your answer by outlining important characteristics of each stage.

7. The Figure 1 has been extracted from the books of New Software & Co. Prepare a profit and loss account for the information below for 31st of December.

8. A company has been presented with three different investment opportunities. Using the net present value (NPV) formulas and a discount rate of 8%, show which opportunity is best option for the company. Show and explain all supporting calculations.

   A Cashflow A: receive $60 today and then receive $60 in four years.
B Cashflow B: receive $7 every year, forever, starting today.

C Cashflow C: pay $50 every year for five years, with the first payment being next year, and then subsequently receive $30 every year for 20 years.

9. To float or not to float? The famous British technology company Dyson generates almost $2B in annual revenues, however it has remained a limited company (Ltd) since its inception. Alternatively, Zoopla, an online real estate platform has floated onto the London Stock Exchange (LSE) in 2014. Dell Computers was delisted from NASDAQ in 2013. Using information gathered from the internet and news articles, discuss why Dyson, Zoopla and Dell made the decisions they did. Focus on the motivation for public vs. private. You may want to consider the following areas.

A Growth and exits
B Markets
C Legal contracts and compliance
D Money and trade

10. Debt to Equity Ratio

A What is the formula for debt to equity ratio?
B Explain the motivations behind why a company might take more equity than debt and vice versa