Machine Learning
Assignment 1

Max.Marks:15

1	Find the classifier (version space) by using Find-S Algorithm for the given dataset.	5

Our Data: Loan Approval Prediction   **Target Attribute**

ID	AGE	JOB_STATUS	OWNS_HOUSE	CREDIT_RATING	CLASS (Yes or No)
1	Young	False	False	Fair	No
2	Young	False	False	Good	No
3	Young	True	False	Good	Yes
4	Young	True	True	Fair	Yes
5	Young	False	False	Fair	No
6	Middle	False	False	Fair	No
7	Middle	False	False	Good	No
8	Middle	True	True	Good	Yes
9	Middle	False	True	Excellent	Yes
10	Middle	False	True	Excellent	Yes
11	Old	False	True	Excellent	Yes
12	Old	False	True	Good	Yes
13	Old	True	False	Good	Yes
14	Old	True	False	Excellent	Yes
15	Old	False	False	Fair	No

2	Apply the **CANDIDATE-ELIMINATION** algorithm step by step for the following data.	5

The concept to be learnt is Grades Good.

	Student	Grades	Hardworking	Intelligent	Unlucky
1.	Peter	Good	Yes	Yes	No
2.	John	Bad	No	Yes	Yes
3.	Charles	Bad	Yes	No	Yes
4.	Paul	Good	Yes	Yes	No
5.	Henry	Good	Yes	Yes	No
6.	Timothy	Bad	No	Yes	No
7.	Edward	Bad	Yes	No	No

3	State and explain Bayes' theorem in details. Explain why we need it and the cases in which we use it. Give two examples and solve them by using Bayes' theorem.	5