

Assume the following axioms facts:

- 1. X is a student.
- 2. X likes interesting classes.
- 3. X doesn't attend boring classes.
- 4. AI classes were boring.
- 5. Attended means present.

Use resolution to answer the question, “Was X present in AI classes?”

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- 1. For solving which types of problem, minimax procedure is appropriate? Why? 2
- 2. Differentiate between Predicate Logic and Propositional Logic. Explain with example. 3
- 3. Assume the following axioms facts:
  - 1. X is a boy.
  - 2. X likes Comedy movies.
  - 3. X doesn't watch action movies.
  - 4. X watched a movie last week.
  - 5. The name of the movie X watched is y.

Convert the above axioms to first order logic.

5

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- 2. Use resolution to answer the question, “Which type of movie Y is?” 5

- 1. Assume the following axioms facts: 5
  - 1. X does unnecessary staffs all over the night.
  - 2. X likes to sleep at day.
  - 3. X studies in CSE department.
  - 4. Classes of CSE department are at day.
  - 5. X does not attend classes.

Convert the above axioms to first order logic.

- 4. Which type of search technique Minimax is? BFS/DFS? Can we make a combination of BFS and DFS in Minimax searching? will it be beneficial? How? 5

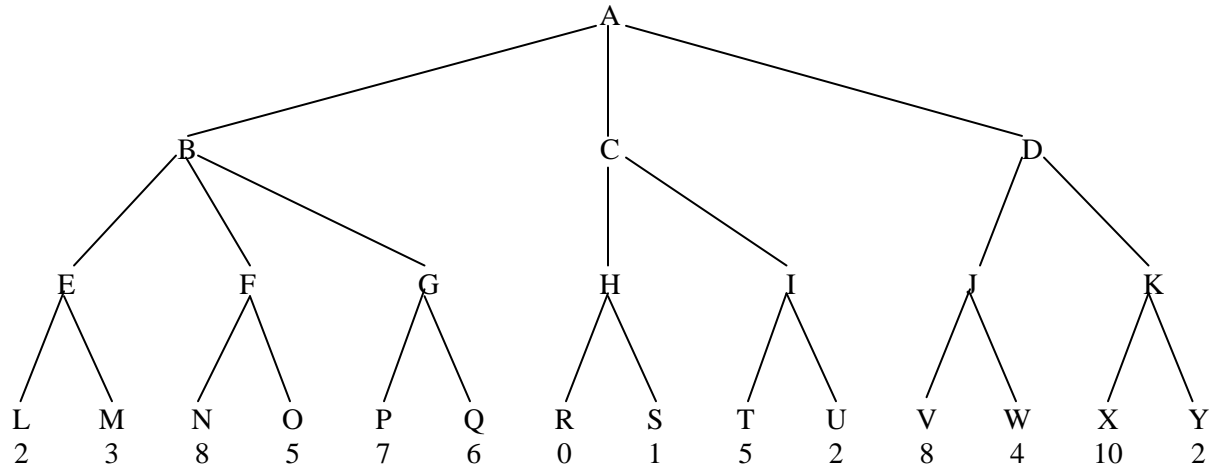
Assume the following axioms facts:

- 1. X is a student.
- 2. X studies in CSE department.
- 3. X has passed HSC in the year 2012.
- 4. Passing year is session.
- 5. The students of 2012 session of CSE department are awesome.

Use resolution to prove the statement, “X is awesome.”

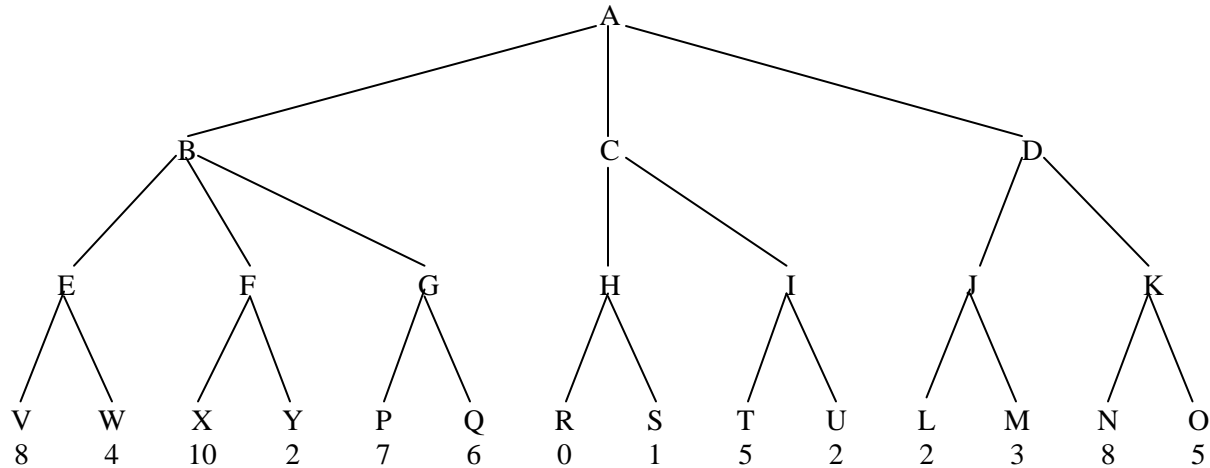
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Consider the following game tree and assume that the first player is the maximizing player:



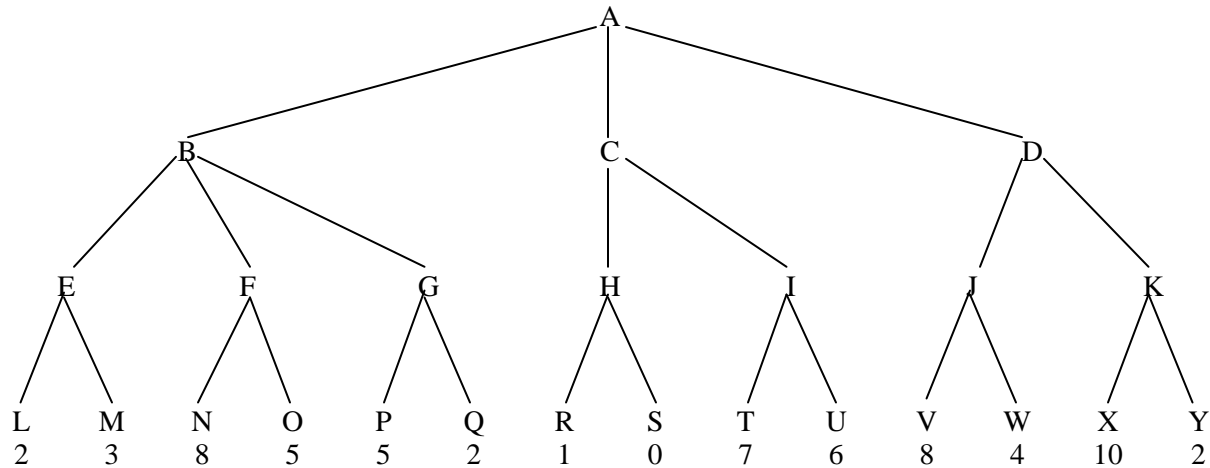
1. Use minimax search procedure to decide which move should the first player choose? Show each step.
2. Apply alpha-beta pruning and list which nodes would not be examined? Show each step.
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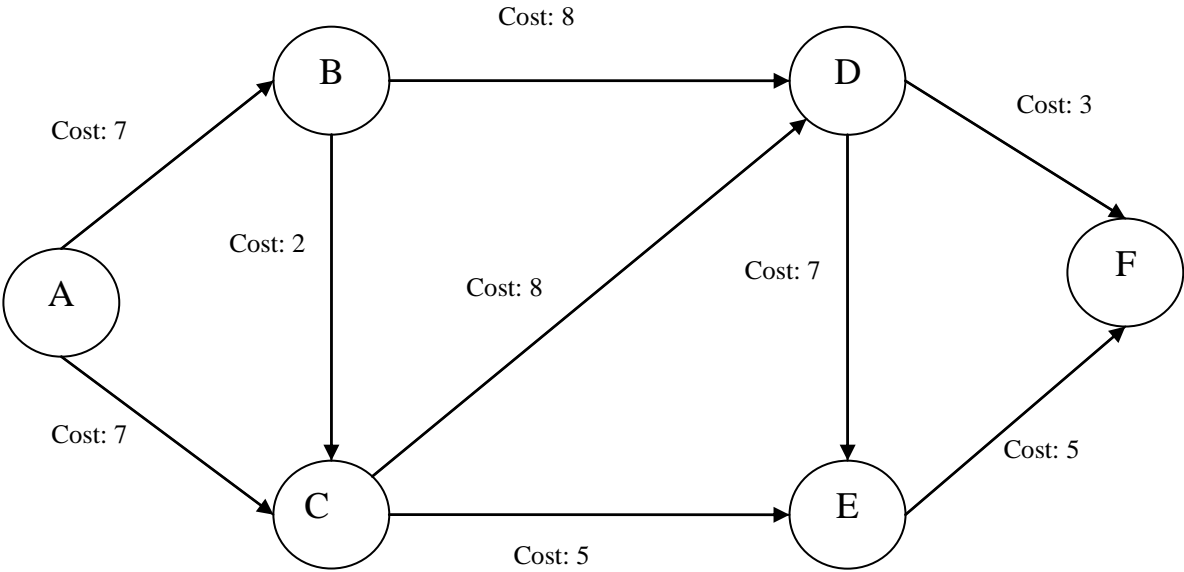
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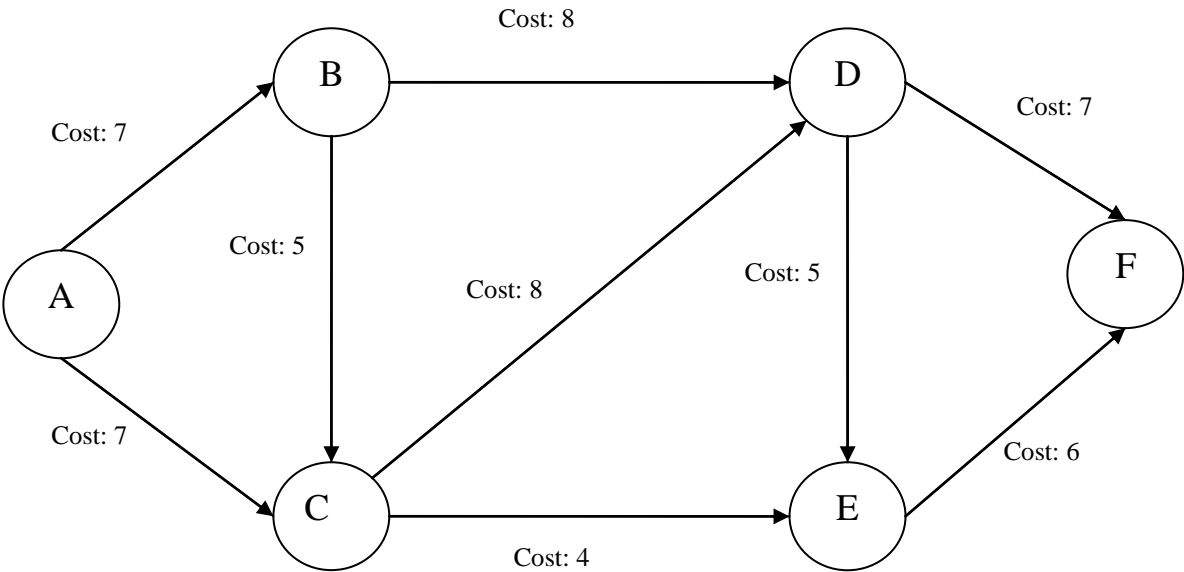
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Assume X and Y are planning a tour which will cover 5 places: B, C, D, E, F. X and Y will pay alternatively trying minimal spending respectively. They will start from A and X will pay first.



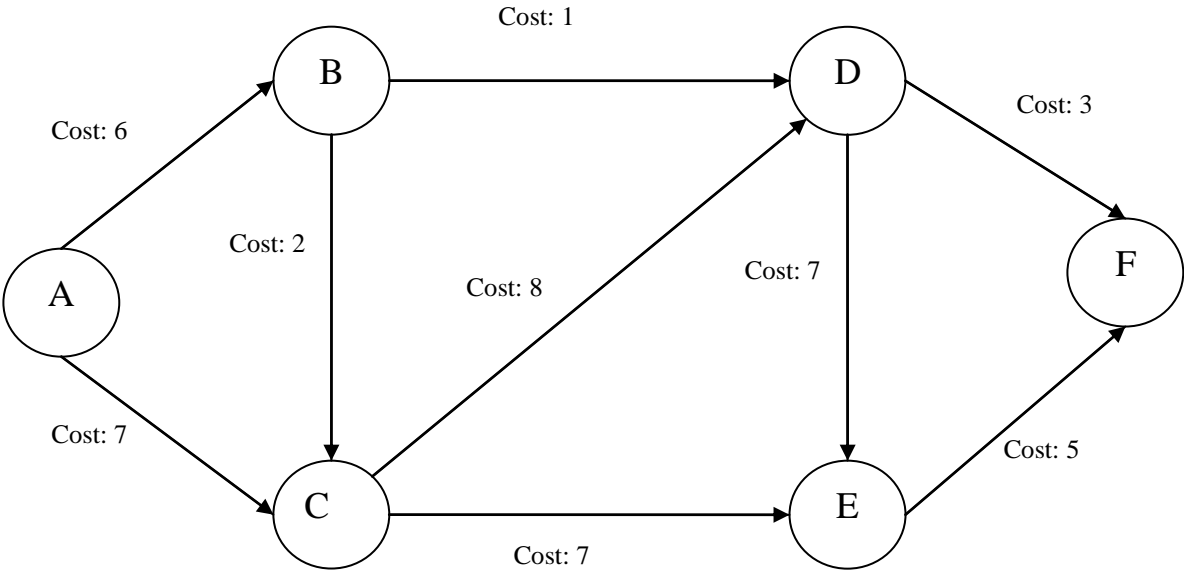
Build a search tree from above map, assign values to leaf node. Apply minimax procedure for X to decide which destination to choose first with minimal spending than Y. 10

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