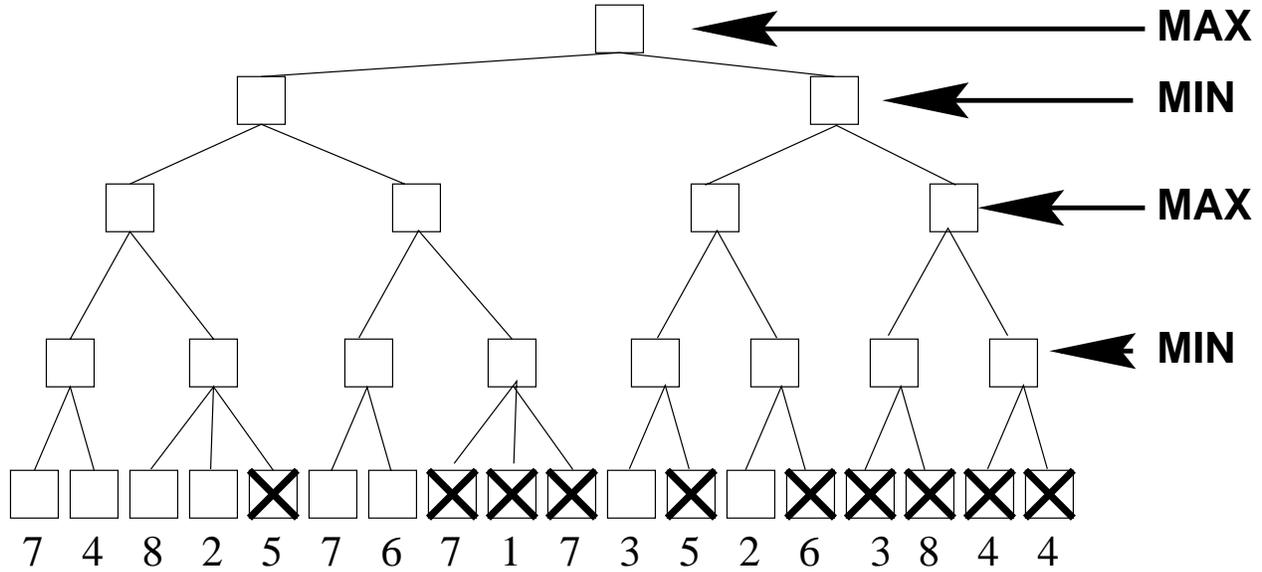


ICS 171 — Quiz #4 — TWENTY (20) minutes

1. (5 pts) NAME AND EMAIL ADDRESS: _____

YOUR ID: _____ ID TO RIGHT: _____ ROW: _____ NO. FROM RIGHT: _____

2. (30 pts max, -5 for each error, but not negative) The following problem asks about alpha-beta pruning in game trees. The game tree below illustrates one position reached in the game. It is MAX's turn to move. Below the leaf nodes are the estimated score of each resulting position returned by the heuristic static evaluator. **CROSS OUT EACH LEAF NODE THAT WILL NOT BE EXAMINED BECAUSE IT IS PRUNED BY ALPHA-BETA PRUNING.**



2. (2.5 pts each, 20 pts total) This question asks about information retrieval of documents from a collection in response to a user query. For each of the following terms on the left, write in the letter corresponding to the correct definition on the right.

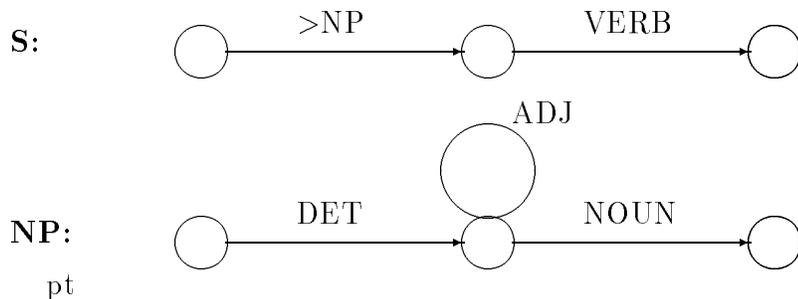
<u> H </u>	tf-idf	A. Build models of the items in collection
<u> C </u>	Retrieval	B. Build model of user request
<u> E </u>	Feedback	C. Documents similar to the query are returned
<u> G </u>	Stemming	D. Relevant documents are shown to user
<u> F </u>	Stoplist	E. User selects useful docs, new query is formulated
<u> B </u>	Query processing	F. Uninformative words to omit/remove
<u> D </u>	Presentation	G. Words are reduced to their root form
<u> A </u>	Document processing	H. Term frequency times inverse document frequency

2. (5 pts each, 45 pts total) Parse the sentence “The brown paper ended.”

Use this lexicon:

WORD	Noun	Verb	Adj.	Det.
brown	Y	Y	Y	
end	Y	Y	Y	
paper	Y	Y	Y	
the				Y

and these transition networks:



You may use the following letters for your answers:

(A) SUCCEEDS; (B) FAILS; (C) The; (D) brown; (E) paper; (F) ended.

Answer the following questions according to the depth-first search for a parse. Explore the ADJ transition before the NOUN transition. The first one is done for you as an example.

- S enters >NP .
- DET consumes The .
- ADJ consumes D .
- ADJ consumes E .
- ADJ consumes ended .
- NP (succeeds or fails) B .
- *** BACKTRACK over “ended.”
- *** ADJ un-consumes “ended.”
- NOUN consumes F .
- NP (succeeds or fails) A .
- *** NP returns ((The DET) (brown ADJ) (paper ADJ) (ended NOUN)).
- VERB (succeeds or fails) B .
- *** BACKTRACK over “ended.”
- *** RETURN to NP.
- *** NOUN un-consumes “ended.”
- *** NP fails.
- *** BACKTRACK over “paper.”
- *** ADJ un-consumes “paper.”
- NOUN consumes E .
- NP (succeeds or fails) A .
- *** NP returns ((The DET) (brown ADJ) (paper NOUN)).
- VERB consumes F .
- S (succeeds or fails) succeeds .