

AI LAB LIST FOR EXAM 2022 (Dept. of CSE/Affiliated Colleges)

Course Code: CSE 4212 Course Title: Artificial Intelligence

- EXP 1 Write a Turbo Prolog program to count number of elements from a list and also find out the largest value from the list.
- EXP 2 Write a Turbo Prolog program to find nth element from a list and reverse the list.
- EXP 3 Write a Turbo Prolog program to count number of elements from a list and also find out the smallest value from the list.
- EXP 4 Write the following Turbo Prolog program. (if this program has any mistakes then correct it) :-

```
domains
name, password=symbol
predicates
getinput (name, password)
logon
user(name, password)
clauses
logon:-
clearwindow,
getinput(Name, Password),

user(Name, Password),
write(" You are now logged on."),nl.
logon:-
write("Sorry, you are not permitted access."),nl.
write(" Please enter your name: "),
logon.
```

```

getinput(Name, Password):-
write(" Please enter your name: "),
readln(Name),nl,
write("Please enter your password: "),
readln(Password),nl.
user(john,superman).
user(sue,happy).
user(bill,bigfoot).

```

Rewrite above the logon example so that the user can attempt entry three times. After three attempts, the program should terminate with a message indicating that the user is not permitted to access.

EXP 5 Write a program to find out the goal using Best-First Search (BFS) algorithm.

EXP 6 Write a program to find out the goal using Depth-first search (DFS) algorithm.

EXP 7 Write a program to solve 8-puzzle problem using Best First Search (BFS).

EXP 8 Write a program to find out English Uppercase or Lowercase alphabets or numbers (0-9) using Backpropagation neural network algorithm/ Convolutional Neural Network algorithm. (Use Python code/ (C/C++)/ Java)

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- EXP 9 Build a feed-forward neural network with an input layer which can accept m -by- n sized image data, ' h ' number of fully connected hidden layers for classifying ' c ' number of classes. Say, $m = 28, n = 28, h = 4$ and $c = 10$. Use Tensorflow and Python.
- EXP 10 Build a convolutional neural network with an input layer which can accept m -by- n sized image data, ' h ' number of convolutional hidden layers for classifying ' c ' number of classes. Say, $m = 28, n = 28, h = 4$ and $c = 10$. Use Tensorflow and Python.
- EXP 11 Using available modules of Tensorflow write a python program to train and test a convolutional neural network for binary classification.
- EXP 12 Using available modules of Tensorflow write a python program to re-train and test a pre-trained model (say, VGG16) for binary classification.