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Dulput

Date:

Aim:

To implement depth first tearch (DF1) to traverse a graph & explane all white by visiting as four along tach branch of possible before backbracking.

Algorithm:

flep 1: Stant

thep a: Initialize an empty stack and a lift to keep brack of visited nodes.

tap 3: Puth the touting node onto stack & mark.

flep 4: White the flack is not emply, vigual 5 to 7

thep 5: Pop the top node from the stack

fleps: Puint on preasely the popped made.

Jap 7: For each adjacent unvisited neighbour of the papped node

1008: Month the neighbour of vijited.

papa: Pugh the unvigited heighbour onto the stack.

flep 10: Repeat until all vuachable node are visited.

-fap 11 : flop.

```
Culput
Program:
   def df. (graph, start).
     tack = [stout]
     visited = jet ()
  While tack to bis land it morphers with the
     node = stack.pop ()
     if node not in visited:
     Duint ( node . end = " ")
      Vilited odd (Node)
    for neighbor in graph (node):
     if neighbour not in vigited:
    flack append (reighbour)
     graph = {
     'A': ['B', L'],
     'B': ['D', 'E'],
      'c' : ['F'],
      'D' : [],
      'E' : ['F']
      'F' :
print (" Drs Travental Etaxhing from node 'A': ")
  off (quaph, 'A')
```

D DES Transgral glasting from node 'A ! joing 1 16 ALF BED (1 to believe . Thus the Drs pringerom is executed and output its verified () gog dody dos 1 Junger July. : Letiziv wi bor above st (box about sives (dow) do bolis · (abov) doop in rodalies no! · beighbour not by vigited. (workplay) burge bull . f : 19040 . C's '8' 7 : 'A' ['1' 4']: 8 1137 0 1 1 1 1 [71] 1 131 191 163 des may printed toprover 1 11 ") I vivi) (A) your to