

write a program to simulate working of stack Using an array with the following a) Rush b) Pop Display: The program should print appropriate musage for stack overflow and stack underflow.

#include (stdio, W)

include <stdlib. h>

define STACK_SIZE 5

int top = -1; int S[10], item;

void push (); void pop()

void display()

int main ()

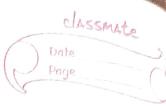
int thoice? while (1)

printf ("In Enter your choice In"); printf ("1: Push 2: Pop 3: Display 4: Erit

sconf (4%d4, & choice);

Switch (choia) case 1: printf (4 Enter the number to be unerted: "); scouf ("%.d", &item); push (); bruak ; case 2'. popl) breaks cax3; display(); bruak , case 4'. exit (0); bruak' défault: print [("INVALID CHOICE IN") void push () if (top = = STACK_SIZE -1) print f ("Stack overflow, invention is not possible in"); nutur ; The State of the same

top=top+1; c[top] = item; printf ("/·d inserted successfully \", item); void pop() if (top = = -1) print ("Stack unduflow, deletion not possible") return; printf ("Item deleted = S[top];
printf ("Item deleted : "X.d In", item deleted); top = top -1; void display() printf ("Stack is empty In"),



printf ("Contents of the stack one: ") for (intop', i top', i ++) y printf (" "/. d", s[i])", 2 printf ("In") Output. Enter your choice 1: Pueh 2: Pop 3: Display 4: Exit Enter the number to be injected ! 10 10 inserted successfully Enter your choice 1: Push 2: Pop 3: Display 4; Exit Enter the number to be injected: 20 20 inserted successfully Enter your choice

1: Push 2: Pop 3: Display 4: Exit Enter the number to be insulted: 30

30 inserted successfully.



Enter your choice li Puch 2: Pop 3: Display 4: Exit. Enter the number to be Injected: 40 Stack overflow, insertion was not possible Enter your choice Enter your choice 1: Puch 2: Pop 3: Display 4: Exit Contents of the stack are: 30 20 10 Enter your choice 1'. Puh 2: Pop 3: Dieplay. 4: Exit Item deleted :30. Enter your choice 3: Display 4: Exit 1: Push 2: Pop Item deluted: 20 Entu your choice 1: Pur h 2: Pop 3: Ruplay 4: Exit

Item dulited: 10,



Enter your choice
1: Puch 2: Pop 3: Display 4: Exit

Stack underflow, deletion not possible

Enter your choice
1: Push 2: Pop 3: Display 4: Exit

3

Stack is ampty.

Enter your choice
1: Push 2: Pop 3: Display 4: Exit
4.