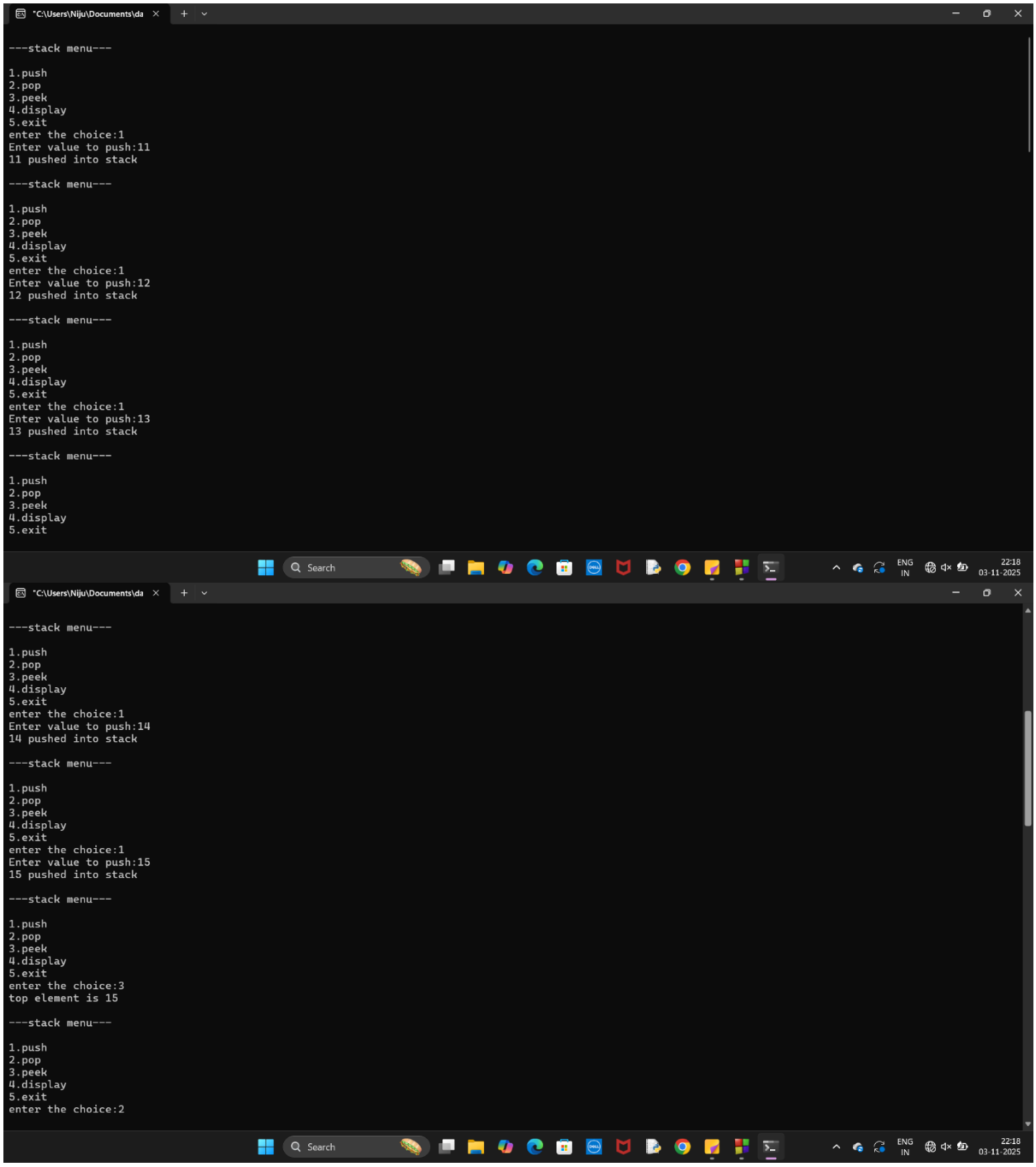
Write the c program to implement stack operations:
1)Push 2)pop 3)peek 4)display 5)exit

```
//operations over stack
#include<stdio.h>
#include<stdlib.h>
#define max 5
int stack[max];
int top=-1;
void push()
{
  int val;
  if(top==max-1)
  {
    printf("\n stack overflow.cannot push\n");
  }
  Else
  {
    printf("Enter value to push:");
    scanf("%d",&val);
    top++;
    stack[top]=val;
    printf("%d pushed into stack \n",val);
  }
}
void pop()
{
  if(top==-1)
  {
    printf("\n stack underflow . cannot pop\n");
  }
  else
  {
    printf("popped element : %d \n",stack[top]);
    top--;
  }
}
void peek()
{
  if(top==-1)
  {
    printf("\n stack is empty\n");
  }
  else{
    printf("top element is %d \n",stack[top]);
  }
}
void display()
{
  if(top==-1)
```

```
  {
    printf("\n stack is empty\n");
  }
  else
  {
    printf("stack elements are :\n");
    for(int i=top;i>=0;i--)
    {
      printf("%d \n",stack[i]);
    }
  }
}
int main()
{
  int choice;
  while(1)
  {
    printf("\n---stack menu---\n");
    printf("\n1.push \n2.pop \n3.peek \n4.display \n5.exit \n");
    printf("enter the choice:");
    scanf("%d",&choice);
    switch(choice)
    {
      case 1:push();
      break;
      case 2:
        pop();
        break;
      case 3:
        peek();
        break;
      case 4:
        display();
        break;
      case 5:
        exit(0);
      default:
        printf("invalid choice. please tyr again\n");
    }
  }
  return 0;
}
```


"C:\Users\Nijju\Documents\da
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:1
Enter value to push:11
11 pushed into stack
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:1
Enter value to push:12
12 pushed into stack
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:1
Enter value to push:13
13 pushed into stack
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
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"C:\Users\Nijju\Documents\da
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:1
Enter value to push:14
14 pushed into stack
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:1
Enter value to push:15
15 pushed into stack
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:3
top element is 15
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
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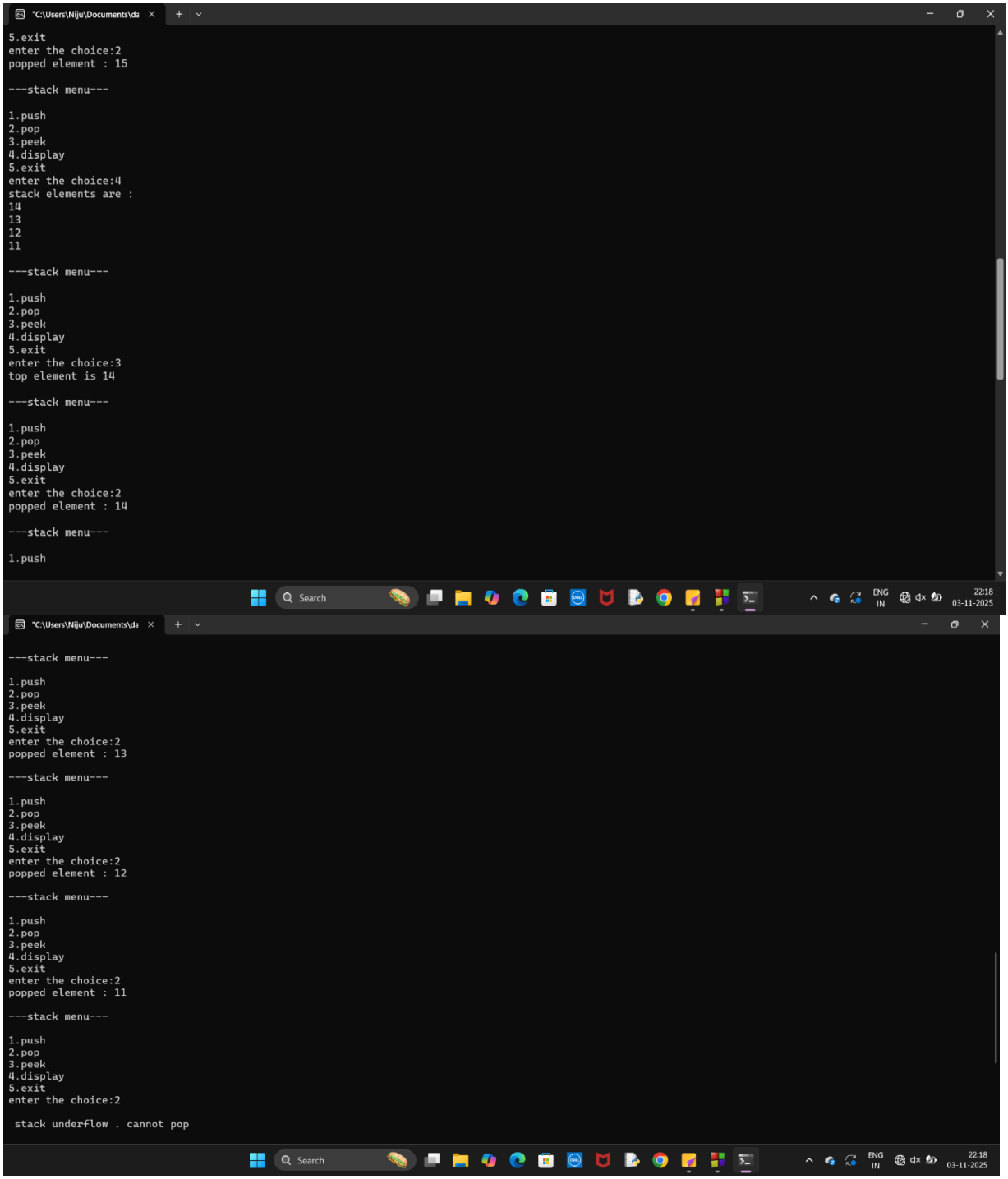
C:\Users\Niju\Documents\da
5.exit
enter the choice:2
popped element : 15
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:4
stack elements are :
14
13
12
11
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:3
top element is 14
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
popped element : 14
---stack menu---
1.push
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C:\Users\Niju\Documents\da
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
popped element : 13
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
popped element : 12
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
popped element : 11
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
stack underflow . cannot pop
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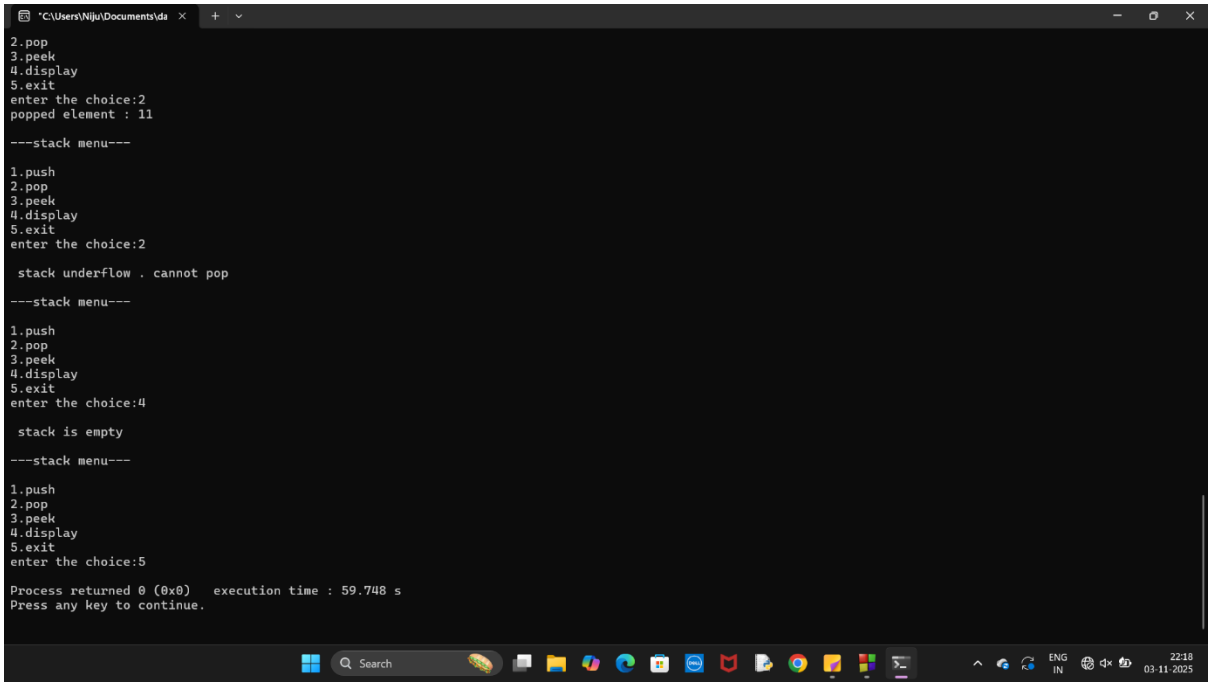
C:\Users\Nijju\Documents\da
2.pop
3.peek
4.display
5.exit
enter the choice:2
popped element : 11
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:2
stack underflow . cannot pop
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:4
stack is empty
---stack menu---
1.push
2.pop
3.peek
4.display
5.exit
enter the choice:5
Process returned 0 (0x0) execution time : 59.748 s
Press any key to continue.
Search
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