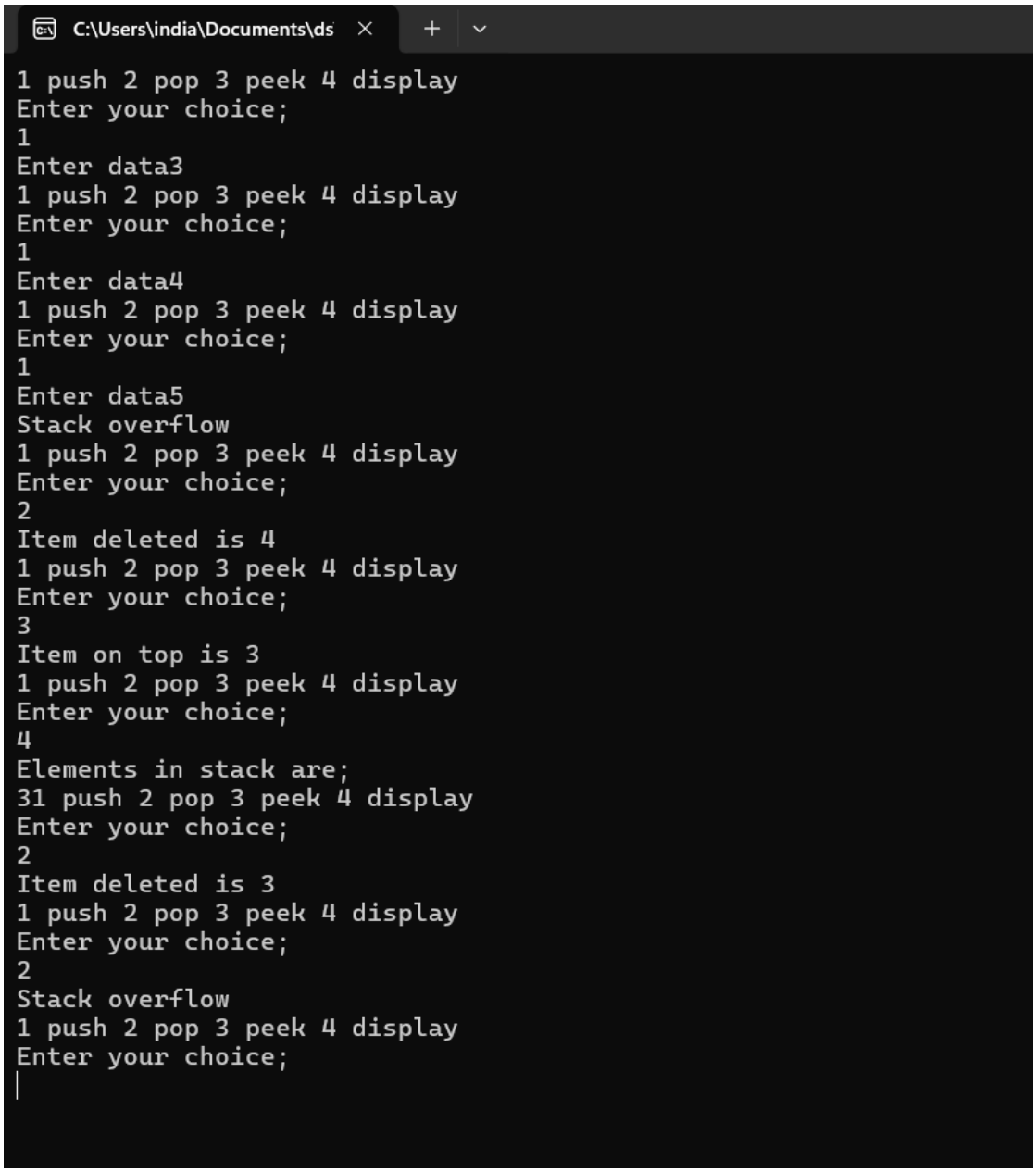
LAB 1


C:\Users\india\Documents\ds
1 push 2 pop 3 peek 4 display
Enter your choice;
1
Enter data3
1 push 2 pop 3 peek 4 display
Enter your choice;
1
Enter data4
1 push 2 pop 3 peek 4 display
Enter your choice;
1
Enter data5
Stack overflow
1 push 2 pop 3 peek 4 display
Enter your choice;
2
Item deleted is 4
1 push 2 pop 3 peek 4 display
Enter your choice;
3
Item on top is 3
1 push 2 pop 3 peek 4 display
Enter your choice;
4
Elements in stack are;
31 push 2 pop 3 peek 4 display
Enter your choice;
2
Item deleted is 3
1 push 2 pop 3 peek 4 display
Enter your choice;
2
Stack overflow
1 push 2 pop 3 peek 4 display
Enter your choice;

DATA STRUCTURES

```
#define N 5
int stack[N];
int top=-1;
void push()
{int x;
 printf("Enter data");
 scanf("%d",&x); }
 if (top==N-1)
  { printf("stack overflow"); }
 else
  { top++;
    stack[top]=x;}
  }
 void pop( )
  {int item;
   if (top==-1)
   {printf("Stack overflow"); }
   else
    { item=stack[top];
      top--;
      printf("Item del is %d",item);
    } }
   void peek()
    {if (top==-1)
     {printf("Stack underflow");
```

```
void display() {
 int i;
 printf("Elements in stack are: ");
 for (i=0; i<=top; i++)
 {printf("%d",stack[i]); }
 if (top==-1)
 { printf("No element "); }
 }

 void main()
 { int y;
while(1){
  printf("1. push , 2. pop , 3. peek , 4. display ");
  printf("Enter your choice;");
  scanf("%d", &y);
  switch(y) {
  case 1: push(x);
          break;
  case 2: pop()
          break;
  case 3; peek();
          break;
  case 4: display();
          break;
  default: printf("Invalid choice");
  } }
  }
```

Output:-

1. push
2. pop
3 peek
4. display.
Enter your choice; 1
Enter data 3

1. push
2 pop
3 peek
4 display
Enter your choice; 1
Enter data 4

1. push
2 pop
3 peek
4 display
Enter your choice; 2
Item deleted is 4

1. push
2 pop
3 peek
4 display
Enter your choice; 3
Item on top is 3.

1. push
2 pop
3 peek
4 display
Enter your choice; 4
Elements in stack are;

1. push
2 pop
3 peek
4 display
Enter your choice; 1
Enter data 5
Stack overflow

1. push
2 pop
3. peek
4. display
Enter your choice; 2
Stack underflow.

11/10/22