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Q write a Java Program using generics, show Stack class for 5 integer and 5 double values. (Create generic class Stack)

Q Strings (Sanjeet P. Pandit, 1BM22CS241)

// 1

o/p: (*) abcd

(*) cd

// 2

(*) char c[] = {'A', 'B', 'C'};

(*) String c_ob = new String(c);

System.out.println(c_ob.length()); // 3

String batch = "22-26";

String mys = "Sanjeet belongs to "+batch+" batch";

System.out.println(mys); // Sanjeet belongs to 22-26 batch

Q (Generics) (Additional)

(*) output: // 1 2 3 4 5 in integer stack & 1.1 2.2 3.3 4.4 5.5 in double stack

Popping Integers from the stack:

5

4

3

2

1

Popping doubles from the stack:

5.5

4.4

3.3

2.2

1.1

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//3

9807

//4

BMSCE

//5

a b c

97 98 99

//6

true

false

false

true

//7

Substring is matched

//8

true

false

//9

true

false

//10

true

false

//11

apple	orange
ball	parrot
cat	queen
dog	ring
ent	stay
free	tree
gun	umbrella
hen	van
ice	whales
jug	xmas
kite	yatch
lift	zee
non net	

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//13

→(13) This is a test. This is too

//14

→(14) hello world

//15

→(15) BMSCE Commege

//16

→(16) "Hello friends"

Generics :

→(1) Write a Java Program to create generic class Stack which hold 5 integers & 5 double values

O/P:

Popping integers from the stack:

5
4
3
2
1

Popping doubles from the Stack:

5.5
4.4
3.3
2.2
1.1

// 12

1 2 3 4 5 6 7 8 9 10

// 17

Student 1	Student 2
name : A	name : B
RegNo : 1	RegNo : 2
Sem : 3	Sem : 3
CGPA : 9.8	CGPA : 9.8

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// 18
Char at 3 is 'o'
dhoni
reverse: inohd

// 19
Eagle is flying
Eage Makes Sound

// 20
Calcarea: 28.26
Calcperi: 18.84

Totarea: 40
Totperi: 83

(Additional code for generics):

→ import java.util.*;
class stack <E> {
    E stk[];
    int top;
    int size = 10;
    stack() {
        stk = (E[]) new object[size];
        top = -1;
    }
    void push(E item) {
        if (top == size - 1) {
            System.out.println("No elements can be added further, overflow");
        }
        else {
            stk[++top] = item;
        }
    }

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```
E pop(){
if(top<0){
   System.out.print("No element can be deleted further, underflow");
   return null;
}
else{
   return stk[top--];
}
}
public class Main{
  public static void main(String args[]){
    Stack<Integer>S1 = new Stack<Integer>();
    Stack<Double>S2 = new Stack<Double>();
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter elements in integer Stack");
    for(int i=0; i<5; i++){
        int n1=sc.nextInt();
        S1.push(n1);
    }
    System.out.println("Enter elements in Double Stack");
    for(int i=0;i<5;i++){
      double n2 = sc.nextDouble();
      S2.push(n2);
    }
//System.out.println("Elements of S1"); System.out.println("Popping
                                        integer from stack");
    for(int i=0; i<5; i++){
        System.out.println(n.pop());
    }
    System.out.println("Popping doubles from the stack");
    for(int i=0; i<5; i++){
        System.out.println(S2.pop());
    }
    sc.close();
}}
```