

~ Programs: → Array is a class

→ when we create array we must create object of integer array.

classmate

Date

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P1) Write a java program to implement the stack using arrays. Write push(), pop(), & display() methods to demonstrate its working.

```
import java.util.*;
class Stack
{
    int MAX = 5;
    int S[] = new int[S[MAX]];
    int top = -1;
    public void push (int item)
    {
        if (top < MAX - 1)
        {
            top++;
            S[top] = item;
            System.out.println("The element is pushed");
        }
        else
        {
            System.out.println("Stack overflow...");
        }
    }
    public int pop()
    {
        if (top == -1)
        {
            System.out.println("Stack empty");
        }
    }
}
```

Output:

1. Push

Enter your choice: 1

2. Pop

3. Display

Enter an Element:

4. Exit

enter your choice: 1 Stack overflow

1

Enter your choice:

enter an element:

2

1 Popped Element: 5

The Element is pushed Enter your choice:

enter your Element: 3

1

Stack contents are:

Enter an Element: 4

2

3

Enter your choice: 2

Enter an Element: 5

Enter an Element: 2 Enter your choice:

3

2

Enter your choice: Popped Element: 4

1

Enter your choice:

Enter an Element:

2

4

Popped Element: 3

Enter your choice:

Enter your choice:

1

2

Enter an Element:

Popped Element: 2

5

B. R. d. - new BufferedReader(System.in)
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object type needed
first when in paid as
argument for Buf. Reader

Q. A. Create a Java class called Student with the following details as variables within it
i) USN ii) Name iii) Branch iv) Phone
Write a Java program to create n Student objects and print the USN, Name, Branch, Phone of these objects with suitable headings.

Class Student

{

private String usn, name, branch, phone;

public Student (String a, String b, String c, String d)

{

{ this.usn = a; }

{ this.name = b; }

{ this.branch = c; }

{ this.phone = d; }

}

public String printname()

{

return name;

}

public String printusn()

{

return usn;

}

public String printbranch() {
↑
return branch;
}

public String printphone() {
↑
return phone;
}

}

public class LAB1A {

public static void main (String[] args) {
int n=0, i=0;

BufferedReader d = new BufferedReader(new
InputStreamReader(System.in));

String USN1, Name1, Branch1, Phone1;

Student[] StudentArray = new Student[7];

try {

↑

System.out.println("Enter no. of students:");

n = Integer.parseInt(d.readLine());

for (i = 1; i <= n; i++)

↑

System.out.println("Enter USN:");

String USN = d.readLine();

System.out.println("Enter Name:");


```

String Name = d.readLine();
System.out.println("Enter branch:");
String Branch = d.readLine();
System.out.println("Enter Phone number:");
String Phone = d.readLine();
StudentArray [i] = new Student(OSN, Name,
                                Branch, Phone);

```

```

}
System.out.println("Student Details:");
System.out.println("OSN\t\Name\t\Branch\t\
Phone");

```

```

for (i = 1; i <= n; i++)
{

```

```

    OSN1 = StudentArray [i].printusn();
    Name1 = StudentArray [i].printname();
    Branch1 = StudentArray [i].printbranch();
    Phone1 = StudentArray [i].printphone();
    System.out.println("OSN1 + "\t" +
    Name1 + "\t" + Branch1 + "\t" + Phone1);

```

```

}
}

```

```

catch (Exception e)
{

```

```

}
}
}

```


Output: Enter number of students to print

Enter number of students to print

Enter USN: 4SF19CS016

4SF19CS016

Enter Name: Akshatha

Akshatha

Enter Branch: CSE

CSE

Enter Phone:

9999000099

Enter USN

4SF19CS000

Enter Name: Amy

Amy

Enter Branch: ISE

ISE

Enter Phone:

9111999900

Student details are:

USN	Name	Branch	Phone
4SF19CS016	Akshatha	CSE	9999000099
4SF19CS000	Amy	ISE	9111999900