

Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: OOP (2CSE303)

Assignment-1

1. Consider an integer Z, print its first 10 multiples. Each multiple through i where $0 < i < 11$, should be printed on a new line as: Z x i=value.

Constraints:

$5 < Z < 41$

SOLUTION

```
package assignment_1;
/**
 *
 * @author yashp
 */
import java.util.*;

public class OOPA1Q1 {
    public static void main(String[] args) {
        Scanner yash = new Scanner(System.in);
        int Z, i, ans;
        System.out.print("\nEnter element whose first 10 multiple you
want to find(5<Z<41): ");
        Z = yash.nextInt();
        if (Z > 5 && Z < 41) {
            for (i = 1; i < 11; i++) {
                ans = Z * i;
                System.out.println(Z + "x" + i + "=" + ans);
            }
        } else {
            System.out.println("Entered element does not satisfy the
given condition.");
        }
    }
}
```

OUTPUT

```

Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x
run:

Enter element whose first 10 multiple you want to find(5<Z<41): 3
Entered element does not satisfy the given condition.
BUILD SUCCESSFUL (total time: 6 seconds)
|

```

```

Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x
run:

Enter element whose first 10 multiple you want to find(5<Z<41): 43
Entered element does not satisfy the given condition.
BUILD SUCCESSFUL (total time: 4 seconds)
|

```

```

Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x
run:

Enter element whose first 10 multiple you want to find(5<Z<41): 13
13x1=13
13x2=26
13x3=39
13x4=52
13x5=65
13x6=78
13x7=91
13x8=104
13x9=117
13x10=130
BUILD SUCCESSFUL (total time: 7 seconds)

```

2. Arjun would like to withdraw X Rs. from an ATM. The cash machine will only accept the transaction if X is a multiple of 5, and Pooja's account balance has enough cash to perform the withdrawal transaction (including bank charges). For each successful withdrawal the bank charges 0.50 Rs. Calculate Pooja's account balance after an attempted transaction.

SOLUTION

```

package assignment_1;
/**

```

```
*
* @author yashp
*/
import java.util.*;

public class OOPA1Q2 {
    public static void main(String[] args) {
        Scanner yash = new Scanner(System.in);
        double bal, amt;
        System.out.print("Enter balance in Pooja's accout: ");
        bal = yash.nextDouble();
        System.out.print("Enter Amount Arjun want to withdraw: ");
        amt = yash.nextDouble();
        if (amt + 0.50 < bal) {
            if (amt % 5 == 0) {
                System.out.print("WITHDRAW TRANSACTION
SUCCESSFUL!!");
                System.out.print("\nBalance in account: " + (bal - amt -
0.5));
            } else {
                System.out.print("Can not withdraw transaction
because withdraw amount is not multiple of 5.");
                System.out.print("\nBalance in Pooja's account: " + bal);
            }
        } else {
            System.out.print("Pooja's account does not have enough
balance.");
        }
        System.out.print("\n");
    }
}
```

OUTPUT

```

Assignment_1 (debug) x Debugger Console x Assignment_1 (run) x
run:
Enter balance in Pooja's accout: 1000
Enter Amount Arjun want to withdraw: 1234
Pooja's account does not have enough balance.
BUILD SUCCESSFUL (total time: 7 seconds)
|

```

```

Assignment_1 (debug) x Debugger Console x Assignment_1 (run) x
run:
Enter balance in Pooja's accout: 1000
Enter Amount Arjun want to withdraw: 123
Can not withdraw transaction because withdraw amount is not multiple of 5.
Balance in Pooja's account: 1000.0
BUILD SUCCESSFUL (total time: 6 seconds)
|

```

```

Assignment_1 (debug) x Debugger Console x Assignment_1 (run) x
run:
Enter balance in Pooja's accout: 1000
Enter Amount Arjun want to withdraw: 250
WITHDRAW TRANSACTION SUCCESSFUL!!
Balance in account: 749.5
BUILD SUCCESSFUL (total time: 5 seconds)

```

3. Write a program to print the names of students by creating a Student class. If no name is passed while creating an object of Student class, then the name should be "Unknown", otherwise the name should be equal to the String value passed while creating object of Student class.

SOLUTION

```

package assignment_1;

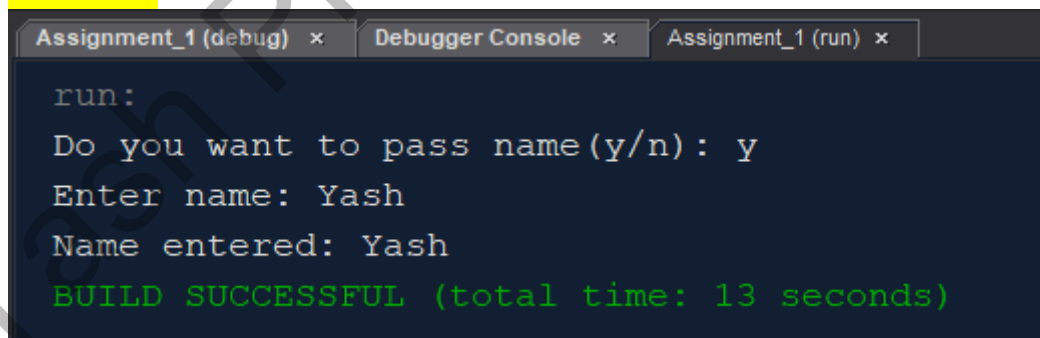
/**
 *
 * @author yashp
 */
import java.util.*;

class student {

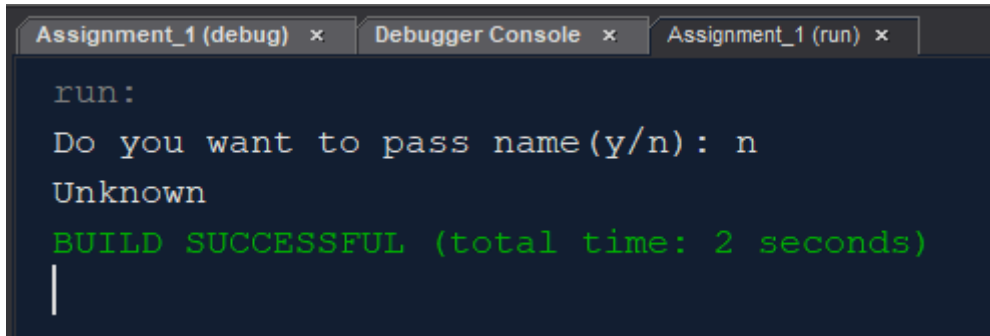
```

```
student() {  
    System.out.print("Unknown");  
}  
  
student(String name) {  
    System.out.print("Name entered: " + name);  
}  
}  
  
public class OOPA1Q3 {  
    public static void main(String[] args) {  
        Scanner yash = new Scanner(System.in);  
        char ch;  
        String name;  
        System.out.print("Do you want to pass name(y/n): ");  
        ch = yash.next().charAt(0);  
        if (ch == 'y' || ch == 'Y') {  
            System.out.print("Enter name: ");  
            name = yash.next();  
            student obj = new student(name);  
        } else {  
            student obj1 = new student();  
        }  
        System.out.print("\n");  
    }  
}
```

OUTPUT



```
Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x  
run:  
Do you want to pass name(y/n): y  
Enter name: Yash  
Name entered: Yash  
BUILD SUCCESSFUL (total time: 13 seconds)
```



```
Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x
run:
Do you want to pass name(y/n): n
Unknown
BUILD SUCCESSFUL (total time: 2 seconds)
|
```

**4. Take 10 integer inputs from user and print the following: number of positive numbers
number of negative numbers
number of odd numbers
number of even
numbers number of 0s.**

SOLUTION

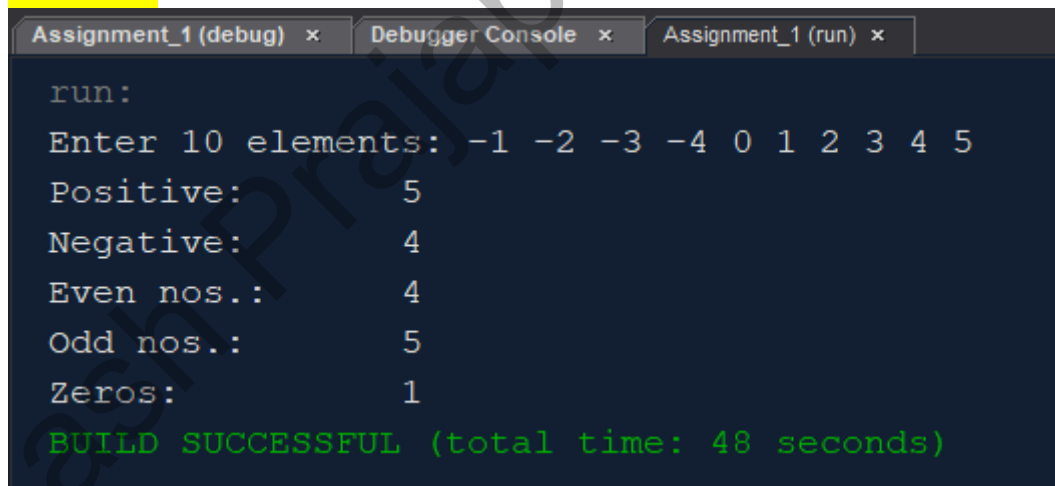
```
package assignment_1;

/**
 *
 * @author yashp
 */
import java.util.*;

public class OOPA1Q4 {
    public static void main(String[] args) {
        Scanner yash = new Scanner(System.in);
        int pos = 0, neg = 0, odd = 0, even = 0, zero = 0;
        int arr[] = new int[10];
        System.out.print("Enter 10 elements: ");
        for (int i = 0; i < 10; i++) {
            arr[i] = yash.nextInt();
        }
        for (int i = 0; i < 10; i++) {
            if (arr[i] > 0) {
                pos++;
            }
            if (arr[i] == 0) {
                zero++;
            }
        }
    }
}
```

```
        if (arr[i] < 0) {
            neg++;
        }
        if (arr[i] % 2 == 0) {
            if (arr[i] == 0) {
                even = even;
            } else {
                even++;
            }
        }
        if (arr[i] % 2 != 0) {
            odd++;
        }
    }
    System.out.print("Positive:\t" + pos + "\nNegative:\t" + neg +
"\nEven nos.:\t" + even + "\nOdd nos.:\t" + odd
    + "\nZeros: \t" + zero);

    System.out.print("\n");
}
}
```

OUTPUT

```
Assignment_1 (debug) x  Debugger Console x  Assignment_1 (run) x
run:
Enter 10 elements: -1 -2 -3 -4 0 1 2 3 4 5
Positive:      5
Negative:      4
Even nos.:     4
Odd nos.:      5
Zeros:         1
BUILD SUCCESSFUL (total time: 48 seconds)
```