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Class:- T.Y.BSc(cs)   Div:-A
Roll No:- 33
Sub:-CS-359 Object Oriented Programming Using Java
Name of Practical:-Java Tools and IDE , Simple Java Program
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Q.1) Write a program to calculate perimeter and area of rectangle.
(hint : area = length * breadth , perimeter=2*(length+breadth))

Program:
```
import java.util.Scanner;
public class Areaperimeter1
{
public static void main(String[] args)
{
int l,b,perimeter,area;
Scanner s = new Scanner(System.in);
System.out.println("Enter length of rectangle:");
l=s.nextInt();
System.out.println("Enter breath of rectangle:");
b=s.nextInt();
perimeter=2*(l+b);
System.out.println("Perimeter of rectangle:"+perimeter);
area=l*b;
System.out.println("area of rectangle:"+area);
}
}
```

Output:
Enter length of rectangle:
4
Enter breath of rectangle:
6
Perimeter of rectangle:20
area of rectangle:24

Q.2) Write a menu driven program to perform the following operations
i.Calculate the volume of cylinder. (hint : Volume: π × r2 × h)
ii.Find the factorial of given number.
iii.Check the number is Armstrong or not.
iv.Exit

Program:
```
import java.util.Scanner;
public class Menudriven
{
public static void main(String[] args)
{
```

```java
int choice;
double radius;
double height;
double volume;
Scanner sc=new Scanner(System.in);

System.out.println("1: volume of cylinder");
System.out.println("2:Factorial of number");
System.out.println("3: number is armstrong or not");
System.out.println("4: exit");
lp: while(true)
{
System.out.println("make your choice");
choice=sc.nextInt();
switch(choice)
{
case 1:
Scanner s=new Scanner(System.in);
System.out.println("Enter the radius");
radius=s.nextDouble();
System.out.println("Enter the height");
height=s.nextDouble();
volume=(22*(radius*radius)*height/7);
System.out.println("volume of cylinder is:"+volume);
break;
case 2:
Scanner a=new Scanner(System.in);
System.out.println("Enter the number:");
int num=a.nextInt();
int i=1,fact=1;
while(i<=num)
{
fact=fact*i;
i++;
}
System.out.println("Factorial of the number:"+fact);
break;
case 3:
int temp,totalDigit=0,res=0,rem,pow;
Scanner b=new Scanner(System.in);
System.out.println("Enter the number");
num=b.nextInt();
temp=num;
while(num>0)
{
num=num/10;
totalDigit++;
}
num=temp;
while(num>0)
{
rem=num%10;
```

```java
pow=1;
i=0;
while(i<totalDigit)
{
pow=pow*rem;
i++;
}
res=res+pow;
num=num/10;
}
if(res==temp)

System.out.println("\n Amstrong number");

else
System.out.println("\n Not an Amstrong number:");
break;
case 4:
System.out.println("EXIT");
break;
}
}
}
}
```

Output:

1: volume of cylinder
2:Factorial of number
3: number is armstrong or not
4: exit
make your choice
1
Enter the radius
4
Enter the height
7
volume of cylinder is:352.0
make your choice
3
Enter the number
125

 Not an Amstrong number:
make your choice
2
Enter the number:
22
Factorial of the number:-522715136
make your choice
4

EXIT
make your choice

Q.3) Write a java program to display the system date and time in various formats shown below:
Current date is : 31/08/2021
Current date is : 08-31-2021
Current date is : Tuesday August 31 2021
Current date and time is : Fri August 31 15:25:59 IST 2021
Current date and time is : 31/08/21 15:25:59 PM +0530
Current time is : 15:25:59
Current week of year is : 35
Current week of month : 5
Current day of the year is : 243
Note: Use java.util.Date and java.text.SimpleDateFormat class

Program:
```java
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;

public class DateFormat{
public static void main(String[] args){
Date date = new Date();
SimpleDateFormat formatter = new SimpleDateFormat("dd/MM/yyyy");
String strDate = formatter.format(date);
System.out.println("Current date is:"+strDate);

formatter= new SimpleDateFormat("MM-dd-yyyy");
strDate = formatter.format(date);
System.out.println("Current date is:"+strDate);

formatter= new SimpleDateFormat("EEEE MMMM dd yyyy");
strDate = formatter.format(date);
System.out.println("Current date is:"+strDate);

formatter = new SimpleDateFormat("E MMMM dd HH:mm:ss z yyyy");
strDate = formatter.format(date);
System.out.println("Current date and time is:"+strDate);

formatter = new SimpleDateFormat("dd/MM/yy HH:mm:ssa Z");
strDate = formatter.format(date);
System.out.println("Current date and time is:"+strDate);

formatter = new SimpleDateFormat("hh:mm:ss");
strDate = formatter.format(date);
System.out.println("Current time is:"+strDate);

formatter = new SimpleDateFormat("w");
strDate = formatter.format(date);
System.out.println("Current  week of year is:"+strDate);
```

```
formatter = new SimpleDateFormat("W");
strDate = formatter.format(date);
System.out.println("Current  week of the month is:"+strDate);

formatter = new SimpleDateFormat("D");
strDate = formatter.format(date);
System.out.println("Current  day of the year is:"+strDate);
}
}
```

Output:
samarth@samarth-Vostro-3250:~$ javac DateFormat.java
samarth@samarth-Vostro-3250:~$ java DateFormat
Current date is:01/08/2025
Current date is:08-01-2025
Current date is:Friday August 01 2025
Current date and time is:Fri August 01 10:48:52 IST 2025
Current date and time is:01/08/25 10:48:52AM +0530
Current time is:10:48:52
Current week of year is:31
Current week of the month is:1
Current day of the year is:213

Q.4) Write a program to accept n names of country and display them in descending order.

Program:

```
import java.util.*;
import java.util.Scanner;
public class Country{
public static void main(String[] args){
Scanner scanner=new Scanner(System.in);
System.out.print("Enter the number of countries:");
int n=scanner.nextInt();
scanner.nextLine();
String[] countries=new String[n];
for(int i=0;i<n;i++){
System.out.print("Enter country name"+(i+1)+":");
countries[i]=scanner.nextLine();
}
Arrays.sort(countries,Collections.reverseOrder());
System.out.println("\nCountries in descending order:");
for(int i=0;i<n;i++){
System.out.println(countries[i]);
}
scanner.close();
}
}
```

Output:

samarth@samarth-Vostro-3250:~$ javac Country.java
samarth@samarth-Vostro-3250:~$ java Country
Enter the number of countries:5
Enter country name1:japan
Enter country name2:china
Enter country name3:india
Enter country name4:america
Enter country name5:rashiya

Countries in descending order:
rashiya
japan
india
china
america

Q5) Write a program to display the 1 to 15 tables.
(1 * 1 = 1
2 * 1 = 2
....
15 * 1 = 15
1 * 2 = 2
2 * 2 = 4
15 * 2 = 30
1 * 3 = 3
2 * 3 = 6
15 * 3 = 45.......... 1 * 10 = 10   2 * 10 = 20   15 * 10 = 150)

Program:
```
import java.util.Scanner;
public class Table
{
public static void main(String[] args)
{
for(int Table=1;Table<=15;Table++)
{
for(int i=1;i<=10;i++)
{
System.out.println(Table+"*"+(i)+"="+(Table*(i)));
}
System.out.println("------------");
}
}
}
```

Output:
samarth@samarth-Vostro-3250:~$ javac Table.java
samarth@samarth-Vostro-3250:~$ java Table
1*1=1
1*2=2
1*3=3
1*4=4

```
1*5=5
1*6=6
1*7=7
1*8=8
1*9=9
1*10=10
-----------
2*1=2
2*2=4
2*3=6
2*4=8
2*5=10
2*6=12
2*7=14
2*8=16
2*9=18
2*10=20
-----------
.
.
.
.
-----------
14*1=14
14*2=28
14*3=42
14*4=56
14*5=70
14*6=84
14*7=98
14*8=112
14*9=126
14*10=140
-----------
15*1=15
15*2=30
15*3=45
15*4=60
15*5=75
15*6=90
15*7=10
15*8=120
15*9=135
15*10=150
-----------
```