slip3

```
import java.lang.Math.*;

class s3q1{

static boolean armstrong(int n){

double sum=0;

double temp=n;

while(n>0)

{

double r=n%10;

sum=sum+Math.pow(r,3);

n=n/10;

}

return (sum==temp);

}

public static void main(String args[])

{

int n=153;

 if(armstrong(n))

 {

  System.out.println("no. is armstrong");

 }else{

  System.out.println("no. is  not armstrong");

  }

 }

}
```

```
import java.lang.Math.*;
abstract class shape
{
double r;
double h;
shape(double r,double h)
{
this.r=r;
this.h=h;
}
abstract double area();
abstract double vol();
}

class cone extends shape
{
 cone(double r,double h)
 {
 super(r,h);
 }
double area()
{
return(Math.PI*r*(r*Math.sqrt(h*h+r*r)));
```

```
}
double vol()
{
return((1.0/3.0)*Math.PI*r*r*h);
}
}
class s3q2
{
public static void main(String args[])
{
cone c1= new cone(5,10);
System.out.println("cone area="+c1.area());
System.out.println("cone vol="+c1.vol());
}
}
```

```
def replace(oldk,newk,dic,newval):
   if oldk in dic:
         dic[newk]=newval
         del dic[oldk]
         print(f"replaced key '{oldk}' with '{newk}':'{dic}'")
   else:
      print(f"key '{oldk}' does not exists.")
dic={
```

```
    'name':'siddhi',
    'age':'20',
    'class':'tybbaca'
}
oldk='age'
newk='year'
newval='2003'

replace(oldk,newk,dic,newval)
```

```
class student:
 def __init__(self,rollno,name,age):
     self.rollno=rollno
     self.name=name
     self.age=age
 def display(self):
     print(f"roll no:'{self.rollno}'")
     print(f"name:'{self.name}'")
     print(f"age:'{self.age}'")

class Test(student):
 def __init__(self,rollno,name,age,marks):
     super().__init__(rollno,name,age)
     self.marks=marks
```

```
 def totalmarks(self):
    return sum(self.marks)

 def display(self):
    super().display()
    print(f"marks:'{self.marks}'")
    print(f"total marks:'{self.totalmarks()}'")


student1 = Test(1, "Alice", 20 , [85, 90, 78])
student2 = Test(2, "Bob", 21,[70, 88, 92])
student3 = Test(3, "Charlie", 22,[95, 85, 90])

print("student display")
student1.display()
print()
student2.display()
print()
student3.display()
```