**Q\_01:**

Code:

package Q\_01;  
  
public class Q\_01 {  
 public static void main(String[] args) {  
   
 // This is a part a   
 int A = 5;  
 int B = 10;  
 int C = 15;  
  
 double answer\_a = Math.*sqrt*( Math.*pow*(B,2) + (4 \* A \* C) );  
 System.*out*.println(answer\_a);  
   
 // This is a part b  
 int X =200;  
 int Y =5;  
  
 double answer\_b = Math.*sqrt*( X+(4\*(Math.*pow*(Y,3))));  
 System.*out*.println(answer\_b);  
   
 // This is a part c  
 double answer\_c = Math.*cbrt*(X\*Y);  
 System.*out*.println(answer\_c);  
   
 // This is a part d  
 int Radius = 21;  
 double answer\_d = Math.*PI*\*Math.*pow*(Radius, 2);  
 System.*out*.println(answer\_d);  
  
 }  
}

Output:

A black screen with a black background

AI-generated content may be incorrect.

**Q\_02:**

**Code:**

package Q\_02;  
  
import java.util.Scanner;  
  
import java.util.Scanner;  
  
public class Q\_02 {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
  
 System.*out*.print("Enter the Length in Centimeters: ");  
 double cm = sc.nextDouble();  
  
 // Convert feet to inches  
 int feet = (int) (cm / 30.48);  
 double remainder = cm % 30.48;  
 double inch = remainder / 2.54;  
  
  
 System.*out*.printf("Entered length in feet and inches: %d ft and %.2f inch%n", feet, inch);  
  
  
 }  
}

Output

A screen shot of a computer

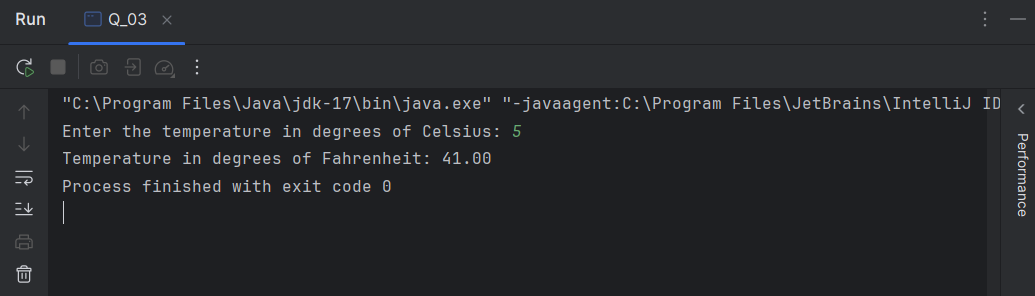
AI-generated content may be incorrect.

Q\_03:

Code:

package Q\_03;  
  
import java.util.Scanner;  
  
public class Q\_03 {  
 public static void main(String[] args) {  
  
 Scanner input= new Scanner(System.*in*);  
 System.*out*.print("Enter the temperature in degrees of Celsius: ");  
  
 double cel = input.nextDouble();  
 double fah = (1.8 \* cel) + 32;  
  
 System.*out*.printf("Temperature in degrees of Fahrenheit: %.2f" ,fah );  
 } **}**

**Output**

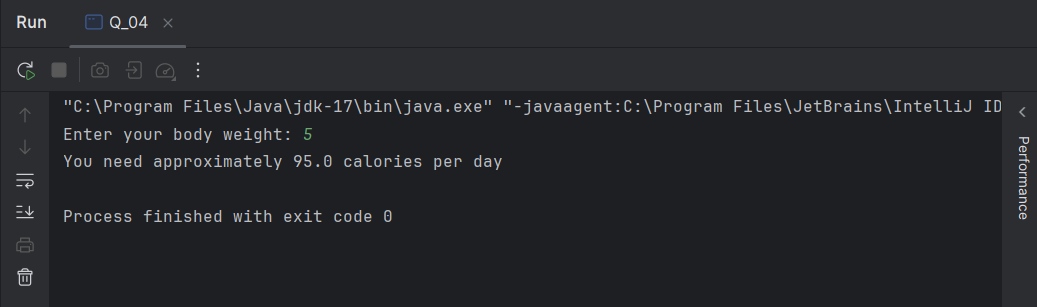


Q\_04

**Code:**

package Q\_04;  
  
import java.util.Scanner;  
public class Q\_04 {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter your body weight: ");  
 double bodyWeight = sc.nextDouble();  
 double calories = bodyWeight \* 19;  
 System.*out*.println("You need approximately " + calories + " calories per day");  
 }  
}

**Output:**



Q\_05

**Code:**

package Q\_05;  
  
import java.util.Scanner;  
  
public class Q\_05 {  
 public static void main(String[] args) {  
  
 Scanner input= new Scanner(System.*in*);  
 System.*out*.print("Enter the temperature in degrees of Fahrenheit: ");  
  
 double fah = input.nextDouble();  
 double cel = (5.0 / 9.0) \* ( fah - 32) ;  
  
 System.*out*.printf("Temperature in degrees of Celsius: %.2f" ,cel );  
 }  
}

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

Q\_06:

**Code:**

package Q\_06;  
  
import java.util.GregorianCalendar;  
import java.util.Scanner;  
  
public class Q\_06 {  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter your birth year: ");  
 int birthyear = input.nextInt();  
  
 GregorianCalendar cal = new GregorianCalendar();  
 int current\_year = cal.get(GregorianCalendar.*YEAR*);  
 //System.out.print(current\_year);  
 int age = current\_year - birthyear;  
  
 System.*out*.printf("You were born in %d and will be %d years old this year", birthyear, age);  
 }  
}

**Output:**

A computer screen with white text

AI-generated content may be incorrect.

Q\_07:

**Code:**

package Q\_07;  
  
import java.util.Scanner;  
  
public class Q\_07 {  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter Your Height(cm): ");  
 int height = input.nextInt();  
  
 System.*out*.print("Enter Your Weight(Kg): ");  
 int weight = input.nextInt();  
  
 double BMI = weight / (Math.*pow*( (height / 100.0), 2));  
 System.*out*.printf("Your BMI value is: %.3f%n" ,BMI);  
  
 if (BMI >= 20 && BMI <= 25) {  
 System.*out*.println("Your BMI value is normal");  
  
 } else  
 System.*out*.println("Your BMI value is not in the healthy range");  
  
 }  
}

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

Q\_08:

**Code:**

package Q\_08;  
  
import java.util.Scanner;  
  
public class Q\_08 {  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter the radius of the sphere: ");  
 double r = input.nextDouble();  
  
 double PI = 3.14;  
 double v = (4.0 / 3.0) \* (PI \* Math.*pow*(r, 3));  
 System.*out*.printf("Volume of the sphere is: %.3f%n" ,v);  
 }  
}

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

Q\_09:

**Code:**

package Q\_09;  
  
import java.util.Scanner;  
  
public class Q\_09 {  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter the amount of investment: ");  
 double P = input.nextDouble();  
  
 System.*out*.print("Enter the annual interest rate(%): ");  
 double R = input.nextDouble();  
  
 System.*out*.print("Enter the number of years for the investment: ");  
 double N = input.nextDouble();  
  
 double grow = P \* (Math.*pow* ( (1 + (R / 100)), N));  
  
 System.*out*.printf("The amount of money you will earn after %.0f years is: $ %.2f" , N, grow);  
 }  
}

**Output:**

A computer screen shot of a code

AI-generated content may be incorrect.

Q\_10:

**Code:**

package Q\_10;  
  
import java.util.Scanner;  
  
public class Q\_10 {  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter the loan amount: ");  
 double l\_amount = input.nextDouble();  
  
 System.*out*.print("Enter the annual interest rate(%): ");  
 double a\_i\_rate = input.nextDouble();  
  
 System.*out*.print("Enter the loan period(in years): ");  
 double l\_period = input.nextDouble();  
 double months = 12.0;  
   
 double m\_i\_rate = (a\_i\_rate / 100.0 / months) ;  
 System.*out*.printf("The monthly interest rate for the loan: %.6f%%%n", m\_i\_rate);  
  
 double no\_payments = (l\_period \* months);  
 System.*out*.printf("Number of payments: %.0f%n", no\_payments);  
  
 double m\_payment = (l\_amount \* m\_i\_rate) / (1 - Math.*pow*( (1 / (1 + m\_i\_rate)), no\_payments));  
 System.*out*.printf("The monthly payment amount: $ %.2f%n", m\_payment);  
  
 double t\_payment = m\_payment \* no\_payments;  
 System.*out*.printf("The total payment amount: $ %.2f%n", t\_payment);  
  
 }  
}

**Output:**

A black rectangular object with a black stripe

AI-generated content may be incorrect.