Q1.

```
package Q1;

import java.util.Scanner;

public class Q1 {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.println("Enter the first integer:");
    int num1 = scanner.nextInt();

    System.out.println("Enter the second integer:");
    int num2 = scanner.nextInt();

    System.out.println("Enter the third integer:");
    int num3 = scanner.nextInt();

    if (num1 >= num2) {
      if (num3 >= num2) {
        System.out.println("Smallest number is " + num2);
      } else {
        System.out.println("Smallest number is " + num3);
      }
    } else if (num1 >= num3) {
      System.out.println("Smallest number is " + num3);
    } else {
      System.out.println("Smallest number is " + num1);
    }
  }
  }
```

Output

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\java.exe "-jav
Enter the first integer:
9
Enter the second integer:
6
Enter the third integer:
3
Smallest number is 3

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\java.exe "-jav
Enter the first integer:
7
Enter the second integer:
1
Enter the third integer:
5
Smallest number is 1

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\
Enter the first integer:
2
Enter the second integer:
5
Enter the third integer:
9
Smallest number is 2

Process finished with exit code 0
```

Q1 method 2:

```
package Q1;

import java.util.Scanner;

public class Q1method2 {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      System.out.println("Enter the first integer:");
      int num1 = scanner.nextInt();

      System.out.println("Enter the second integer:");
      int num2 = scanner.nextInt();

      System.out.println("Enter the third integer:");
      int num3 = scanner.nextInt();

      int smallest;

      if(num1<=num2 && num1<=num3){
         smallest=num1;
      } else if (num2<=num1 && num2<=num3) {
         smallest=num2;
      }else{
         smallest=num3;
      }
      System.out.println("Smallest number is "+smallest);
   }
}
```

Output for method 2:

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bi
Enter the first integer:
1
Enter the second integer:
4
Enter the third integer:
5
Smallest number is 1

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\
Enter the first integer:
3
Enter the second integer:
2
Enter the third integer:
7
Smallest number is 2

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2
Enter the first integer:
9
Enter the second integer:
6
Enter the third integer:
3
Smallest number is 3

Process finished with exit code 0
```

Q2:

```
package Q2;

import java.util.Scanner;

public class Q2 {
   public static void main(String[] args) {
      Scanner scanner= new Scanner(System.in);

      System.out.println("0. Magenta");
      System.out.println("1. Cyan");
      System.out.println("2. Red");
      System.out.println("3. Blue");
      System.out.println("4. Green");

      System.out.println("Select one color from the above list:");

      int selection= scanner.nextInt();

      switch(selection){
         case 0:
            System.out.println("You selected Magenta.");
            break;

         case 1:
            System.out.println("You selected Cyan.");
            break;

         case 2:
            System.out.println("You selected Red.");
            break;

         case 3:
            System.out.println("You selected Blue.");
            break;

         case 4:
            System.out.println("You selected Green.");
            break;

         default:
            System.out.println("Invalid selection.");
      }
   }
}
```

Output:

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\ja
0. Magenta
1. Cyan
2. Red
3. Blue
4. Green
Select one color from the above list:
0
You selected Magenta.

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\
0. Magenta
1. Cyan
2. Red
3. Blue
4. Green
Select one color from the above list:
4
You selected Green.

Process finished with exit code 0
```

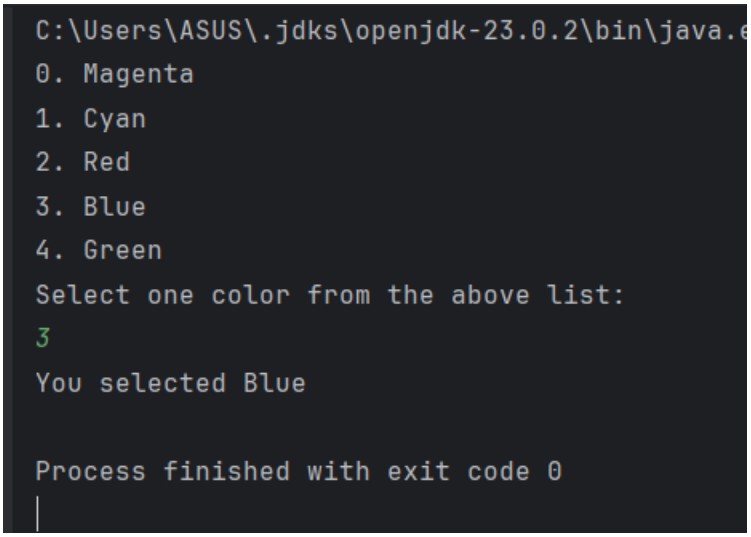
```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\
0. Magenta
1. Cyan
2. Red
3. Blue
4. Green
Select one color from the above list:
2
You selected Red.

Process finished with exit code 0
```

Q2 Method 2:

```
package Q2;

import java.util.Scanner;

public class Q2method2 {
   public static void main(String[] args) {
      Scanner scanner= new Scanner(System.in);

      System.out.println("0. Magenta");
      System.out.println("1. Cyan");
      System.out.println("2. Red");
      System.out.println("3. Blue");
      System.out.println("4. Green");

      System.out.println("Select one color from the above list:");

      int selection= scanner.nextInt();

      String color;

      switch(selection){
         case 0:
            color="Magenta";
            break;

         case 1:
            color="Cyan";
            break;

         case 2:
            color="Red";
            break;
```

```
case 3:
        color="Blue";
        break;

    case 4:
        color="Green";
        break;

    default:
        color="Invalid color";
        break;

  }
  System.out.println("You selected "+color);
}
```

Output:



Q3 :

```
package Q3;

import java.util.Scanner;

public class Q3 {
   public static void main(String[] args) {
      Scanner scanner= new Scanner(System.in);

      System.out.println("Enter the power of 10 in integer:");
      int power= scanner.nextInt();

      switch(power){
         case 6:
            System.out.println("Million");
            break;

         case 9:
            System.out.println("Billion");
            break;

         case 12:
            System.out.println("Trillion");
            break;

         case 15:
            System.out.println("Quadrillion");
            break;

         case 18:
            System.out.println("Quintillion");
            break;
```

```
case 21:
            System.out.println("Sextillion");
            break;

        case 30:
            System.out.println("Nonillion");
            break;

        case 100:
            System.out.println("Googol");
            break;

        default:
            System.out.println("Invalid power.");
    }
  }
}
```

Output:

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\
Enter the power of 10 in integer:
100
Googol

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\b
Enter the power of 10 in integer:
30
Nonillion

Process finished with exit code 0
```

Q3 method 2:

```
package Q3;

import java.util.Scanner;

public class Q3method2 {
   public static void main(String[] args) {
        Scanner scanner= new Scanner(System.in);

        System.out.println("Enter the power of 10 in integer:");
        int power= scanner.nextInt();

        String name;

        switch(power){
          case 6:
            name="Million";
            break;

          case 9:
            name="Billion";
            break;

          case 12:
            name="Trillion";
            break;

          case 15:
            name="Quadrillion";
            break;

          case 18:
            name="Quintillion";
            break;
```

```
case 21:
            name="Sextillion";
            break;

          case 30:
            name="Nonillion";
            break;

          case 100:
            name="Googol";
            break;

          default:
            name="Invalid power";
       }
          System.out.println(name);

    }
}
```

Output for method 2:

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\
Enter the power of 10 in integer:
18
Quintillion

Process finished with exit code 0
```

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\b
Enter the power of 10 in integer:
35
Invalid power

Process finished with exit code 0
```

Q4:

```
package Q4;

import java.util.Scanner;

public class Q4 {
   public static void main(String[] args) {
        Scanner scanner= new Scanner(System.in);

        System.out.println("Enter the year:");
        int year= scanner.nextInt();

        if(year %4==0){
          if(year %100!=0) {
             System.out.println("It is a Leap year.");
          } else if (year %100==0 && year %400==0 ) {
             System.out.println("It is a Leap year.");
          }else{
             System.out.println("It is not a Leap year.");
          }
        }else{
           System.out.println("It is not a Leap year.");
        }
   }
}
```

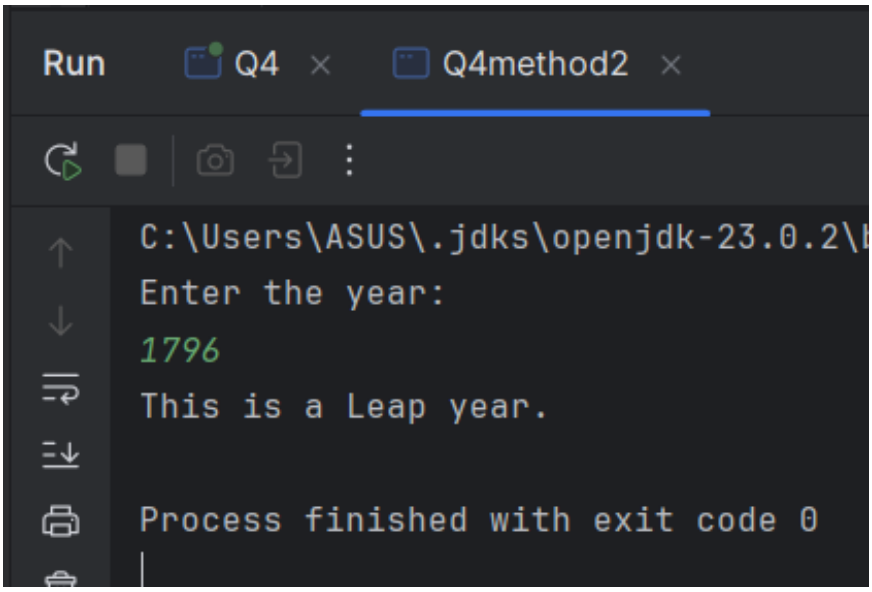
Output:

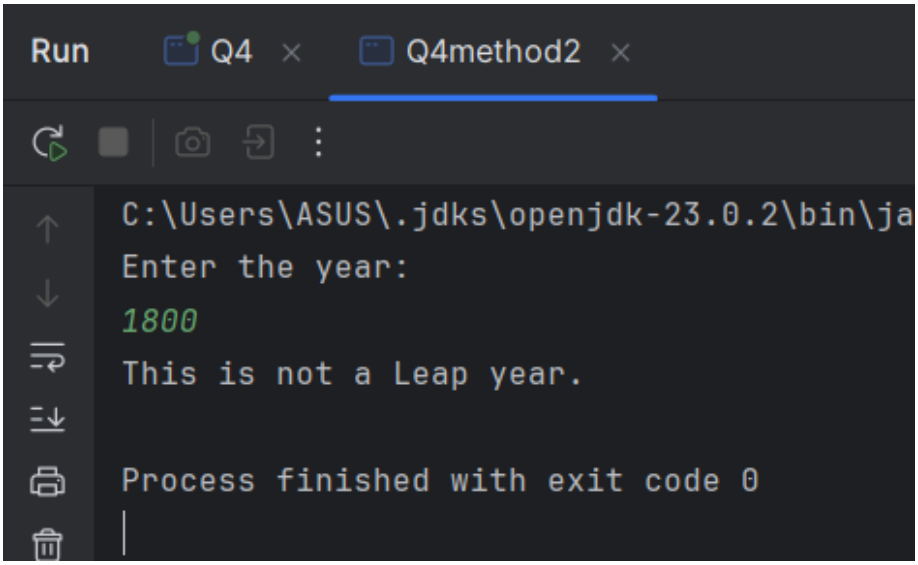
```
C:\Users\ASUS\.jdks\openjdk-23.0.2\b
Enter the year:
2000
It is a Leap year.

Process finished with exit code 0
```

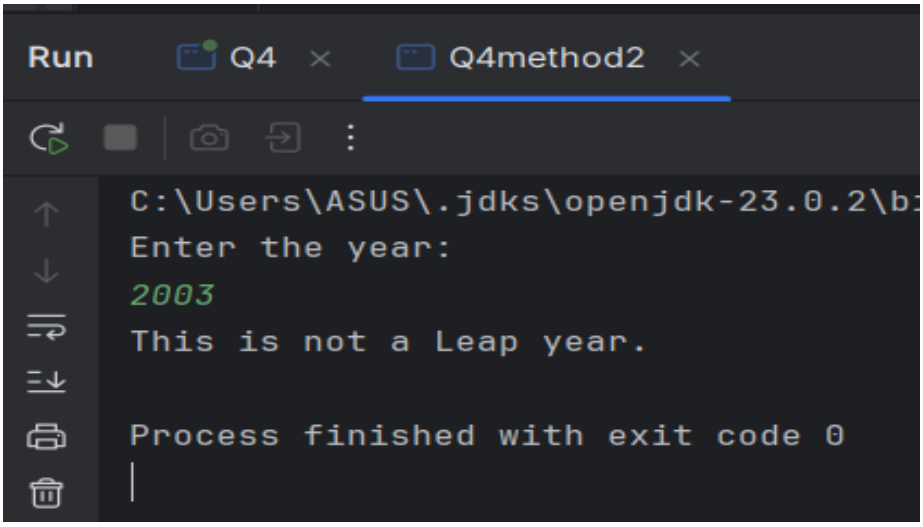
Q4 Method 2:

```
package Q4;

import java.util.Scanner;

public class Q4method2 {
   public static void main(String[] args) {
      Scanner scanner= new Scanner(System.in);

      System.out.println("Enter the year:");
      int year= scanner.nextInt();

     if( (year %4==0 && year %100!=0) ||(year %4==0 && year%100==0 && year%400==0) ){
        System.out.println("This is a Leap year.");
      }else{
        System.out.println("This is not a Leap year.");
     }
   }
}
```

Output for method 2:



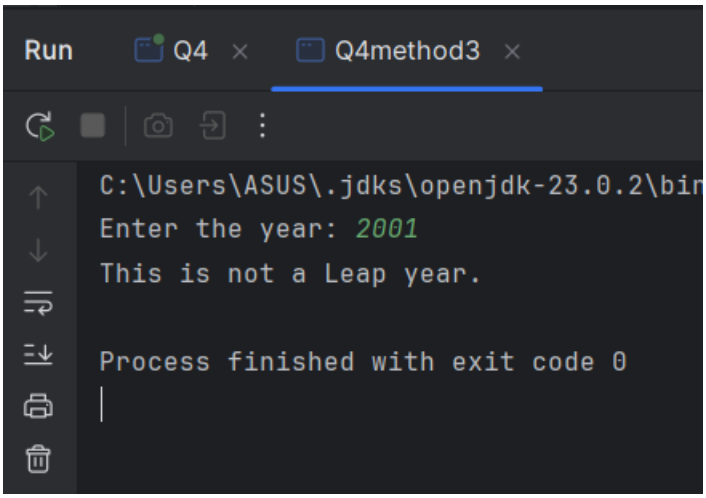

Run
Q4
Q4method2
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\ja
Enter the year:
1800
This is not a Leap year.
Process finished with exit code 0


Run
Q4
Q4method2
C:\Users\ASUS\.jdks\openjdk-23.0.2\bi
Enter the year:
2003
This is not a Leap year.
Process finished with exit code 0

Q4 Method 3:

```
package Q4;

import java.util.Scanner;

public class Q4method3 {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      System.out.print("Enter the year: ");
      int year = scanner.nextInt();

      if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
         System.out.println("This is a Leap year.");
      } else {
         System.out.println("This is not a Leap year.");
      }
   }
}
```

Output for method 3:



Q5:

```
package Q5;

import java.util.Scanner;

public class Q5 {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      System.out.println("*** Welcome to MyJava Lo-Fat Burgers ***");

      // Entree Menu
      System.out.println("\n**** Entree Menu ****");
      System.out.println("1 -> Tofu Burger    $3.49");
      System.out.println("2 -> Cajun Chicken   $4.59");
      System.out.println("3 -> Buffalo Wings   $3.99");
      System.out.println("4 -> Rainbow Fillet  $2.99");

      // Side Dish Menu
      System.out.println("\n**** Side Dish Menu ****");
      System.out.println("1 -> Rice Cracker    $0.79");
      System.out.println("2 -> No-Salt Fries   $0.69");
      System.out.println("3 -> Zucchini       $1.09");
      System.out.println("4 -> Brown Rice     $0.59");

      // Drink Menu
      System.out.println("\n**** Drink Menu ****");
      System.out.println("1 -> Cafe Mocha     $1.99");
      System.out.println("2 -> Cafe Latte     $1.90");
      System.out.println("3 -> Espresso       $2.49");
      System.out.println("4 -> Oolong Tea     $0.99");
```

```
int entree;
int eqty = 0;
//*****Entree selection*****
System.out.println("Enter 0 to skip the Entree menu or Enter 1 to 4:");
entree = scanner.nextInt();
while (entree < 1 || entree > 4) {
   System.out.println("Invalid entree! Please enter again.");
   entree = scanner.nextInt();
}

double ecost = 0;
switch (entree) {
   case 1:
      ecost = 3.49;
      break;

   case 2:
      ecost = 4.59;
      break;

   case 3:
      ecost = 3.99;
      break;

   case 4:
      ecost = 2.99;
      break;
}

if (entree != 0) {
   System.out.println("Enter the quantity");
   eqty = scanner.nextInt();
}
```

```
int side;
//*****Side dish selection*****
System.out.println("Enter 0 to skip the Side Dish menu or Enter 1 to 4:");
side = scanner.nextInt();
while (side < 1 || side > 4) {
   System.out.println("Invalid entree! Please enter again.");
   side = scanner.nextInt();
}

double scost = 0;
int sqty = 0;
switch (side) {
   case 1:
      scost = 0.79;
      break;

   case 2:
      scost = 0.69;
      break;

   case 3:
      scost = 1.09;
      break;

   case 4:
      scost = 0.59;
      break;
}

if (side != 0) {
   System.out.println("Enter the quantity");
   sqty = scanner.nextInt();
}
```

```
int drink;
int dqty = 0;
//*****Drink selection*****
System.out.println("Enter 0 to skip the Drink menu or Enter 1 to 4:");
drink = scanner.nextInt();
while (drink < 1 || drink > 4) {
  System.out.println("Invalid entree! Please enter again.");
  drink = scanner.nextInt();
}

double dcost = 0;
switch (drink) {
  case 1:
    dcost = 1.99;
    break;

  case 2:
    dcost = 1.90;
    break;

  case 3:
    dcost = 2.49;
    break;

  case 4:
    dcost = 0.99;
    break;
}

if (drink != 0) {
  System.out.println("Enter the quantity");
  dqty = scanner.nextInt();
}
```

```
//Display Bill
      if (entree == 0 && side == 0 && drink == 0) {
         System.out.println("No Items Selected");
      } else {
         double total = (eqty * ecost) + (sqty * scost) + (dqty * dcost);

         System.out.println("\n*** Your Order ***");
         System.out.println("Category    Price   Qty   Amount");
         System.out.println("-----------------------------------");
         System.out.printf("Entree:     $%.2f    %d    $%.2f\n", ecost, eqty, ecost * eqty);
         System.out.printf("Side Dish:  $%.2f    %d    $%.2f\n", scost, sqty, scost * sqty);
         System.out.printf("Drink:      $%.2f    %d    $%.2f\n", dcost, dqty, dcost * dqty);
         System.out.println("-----------------------------------");
         System.out.printf("Total:                 $%.2f\n", total);
         System.out.println("-----------------------------------");
      }

   }
}
```

Q5 Output :

```
C:\Users\ASUS\.jdks\openjdk-23.0.2\bin\java.exe "-javaage
*** Welcome to MyJava Lo-Fat Burgers ***

**** Entree Menu ****
1 -> Tofu Burger     $3.49
2 -> Cajun Chicken   $4.59
3 -> Buffalo Wings   $3.99
4 -> Rainbow Fillet  $2.99

**** Side Dish Menu ****
1 -> Rice Cracker    $0.79
2 -> No-Salt Fries   $0.69
3 -> Zucchini        $1.09
4 -> Brown Rice      $0.59

**** Drink Menu ****
1 -> Cafe Mocha      $1.99
2 -> Cafe Latte      $1.90
3 -> Espresso        $2.49
4 -> Oolong Tea      $0.99
Enter 0 to skip the Entree menu or Enter 1 to 4:
4
Enter the quantity
6
```

```
Enter 0 to skip the Entree menu or Enter 1 to 4:
4
Enter the quantity
6
Enter 0 to skip the Side Dish menu or Enter 1 to 4:
3
Enter the quantity
11
Enter 0 to skip the Drink menu or Enter 1 to 4:
1
Enter the quantity
9

*** Your Order ***
Category     Price   Qty   Amount
-----------------------------------
Entree:      $2.99    6    $17.94
Side Dish:   $1.09    11    $11.99
Drink:       $1.99    9    $17.91
-----------------------------------
Total:                    $47.84
-----------------------------------

Process finished with exit code 0
```