```java
import java.util.Scanner;

// Michael Cohen
// Chapter 5: Programming Challenge 1

public class showChar
{
    public static void showChar(String word, int position)
    {
        char letter = word.charAt(position);
         System.out.println(letter);
    }

   public static void main(String[] args)
    {
      Scanner keyboard = new Scanner(System.in);
      System.out.print("Enter a line of text: ");
      String word = keyboard.nextLine();
      System.out.print("Enter your index: ");
      int position = keyboard.nextInt();
      showChar(word, position);
    }

}
```

LetterCounter.ja... | ESPGame.java | RNGGame.java | RNGGa

ages | jGRASP Messages | Run I/O | Interactions

```
 ----jGRASP exec: java showChar
Enter a line of text: Cohen, Michael
Enter your index: 0
C

 ----jGRASP: operation complete.

 ----jGRASP exec: java showChar
Enter a line of text: Michael Cohen
Enter your index: 5
e

 ----jGRASP: operation complete.

 ----jGRASP exec: java showChar
Enter a line of text: Say Hello World
Enter your index: 8
o

 ----jGRASP: operation complete.
```

```java
import java.util.Scanner;
import java.text.DecimalFormat;

// Michael Cohen
// Chapter 5: Programming Challenge 7

public class TestAverageAndGrade
{
    public static double calcAverage(double student1, double student2, double student3, double student4, double student5)
    {
        double avg = ((student1 + student2 + student3 + student4 + student5) / 5);
         return avg;
    }
    public static char determineGrade(double grade)
    {
        char letter = ' ';
        if (grade >= 90)
            letter = 'A';
        else if (grade < 90 && grade >= 80)
            letter = 'B';
        else if (grade < 80 && grade >= 70)
            letter = 'C';
        else if (grade < 70 && grade >= 60)
            letter = 'D';
        else if (grade < 60)
            letter = 'F';
         return letter;
    }
   public static void main(String[] args)
    {
      Scanner keyboard = new Scanner(System.in);
      System.out.print("Enter test grade for student 1:");
      double student1 = keyboard.nextDouble();
      System.out.print(" Enter test grade for student 2:");
      double student2 = keyboard.nextDouble();
      System.out.print(" Enter test grade for student 3:");
      double student3 = keyboard.nextDouble();
      System.out.print(" Enter test grade for student 4:");
      double student4 = keyboard.nextDouble();
      System.out.print(" Enter test grade for student 5:");
      double student5 = keyboard.nextDouble();
      System.out.println(" The letter grades are as follows:");
      System.out.println("Student 1: " + determineGrade(student1));
      System.out.println("Student 2: " + determineGrade(student2));
      System.out.println("Student 3: " + determineGrade(student3));
      System.out.println("Student 4: " + determineGrade(student4));
      System.out.println("Student 5: " + determineGrade(student5));
      double avg = calcAverage(student1, student2, student3, student4, student5);
      DecimalFormat df = new DecimalFormat("#.00");
      System.out.print("The average grade was: " + df.format(avg));
    }

}
```

Compile Messages | jGRASP Messages | Run I/O | Interactions

End | Clear | Help

```
 ----jGRASP exec: java TestAverageAndGrade
Enter test grade for student 1:91
 Enter test grade for student 2:91
 Enter test grade for student 3:92
 Enter test grade for student 4:93
 Enter test grade for student 5:95
 The letter grades are as follows:
Student 1: A
Student 2: A
Student 3: A
Student 4: A
Student 5: A
The average grade was: 92.40
 ----jGRASP: operation complete.

 ----jGRASP exec: java TestAverageAndGrade
Enter test grade for student 1:10
 Enter test grade for student 2:65
 Enter test grade for student 3:71
 Enter test grade for student 4:82
 Enter test grade for student 5:93
 The letter grades are as follows:
Student 1: F
Student 2: D
Student 3: C
Student 4: B
Student 5: A
The average grade was: 64.20
 ----jGRASP: operation complete.
```

```java
import java.util.Scanner;

// Michael Cohen
// Chapter 5: Programming Challenge 9

public class distance
{
    public static void distance(int speed, int time)
    {
        int count;
        System.out.println("Hour Distance Travelled");
        System.out.println("-------------------------");

        for(count = 1; count <= time; ++count)
        {
            System.out.println(count + "\t\t" + (count*speed));
        }
    }

   public static void main(String[] args)
    {
      Scanner keyboard = new Scanner(System.in);
      int speed, time;
      int count;
      do {
          System.out.print("Enter vehicle speed (in mph): ");
          speed = keyboard.nextInt();
        } while(speed < 0);
      do {
          System.out.print("Enter time travelled (in hrs): ");
          time = keyboard.nextInt();
        } while(time < 1);

      distance(speed, time);
    }

}
```

Compile Messages | jGRASP Messages | Run I/O | Interactions

End | Clear | Help

```
 ----jGRASP exec: java distance
Enter vehicle speed (in mph): 60
Enter time travelled (in hrs): 3
Hour  Distance Travelled
-------------------------
1     60
2     120
3     180

 ----jGRASP: operation complete.

 ----jGRASP exec: java distance
Enter vehicle speed (in mph): 60
Enter time travelled (in hrs): 4
Hour  Distance Travelled
-------------------------
1     60
2     120
3     180
4     240

 ----jGRASP: operation complete.

 ----jGRASP exec: java distance
Enter vehicle speed (in mph): 50
Enter time travelled (in hrs): 5
Hour  Distance Travelled
-------------------------
1     50
2     100
3     150
4     200
5     250

 ----jGRASP: operation complete.
```