Selection assignments

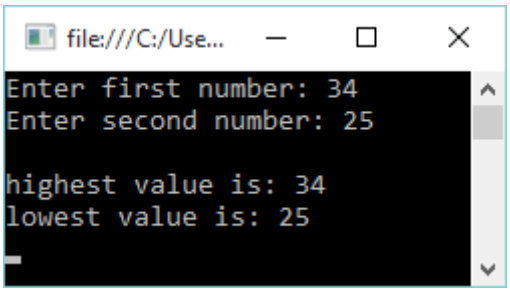
When creating the program code, you must apply the following basic principles:

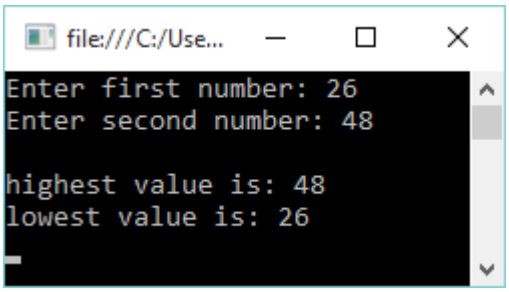
- create a separate project for each assignment;
- use name ‘assignment1’, ‘assignment2’, etcetera for the projects;
- create one solution for each week containing the projects for that week;
- make sure the output of your programs is the same as the given screenshots;

Note: for assignment 4 and assignment 7, your output must contain a dot (.) as a decimal separator, and not a comma (,), see screenshots of these assignments. To make sure your program uses a dot, add the following code to your program (2 using-statements and the code at the start of your Main-method):

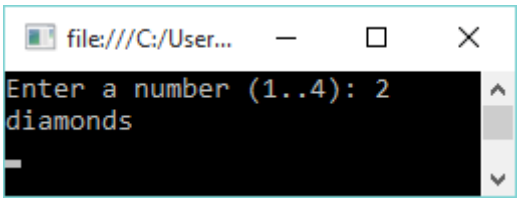
```
using System;
using System.Globalization;
using System.Threading;

static void Main(string[] args)
{
    // set culture of program
    CultureInfo ci = new CultureInfo("en-US");
    Thread.CurrentThread.CurrentUICulture = ci;
    Thread.CurrentThread.CurrentCulture = ci;

    // your code here...
}
```

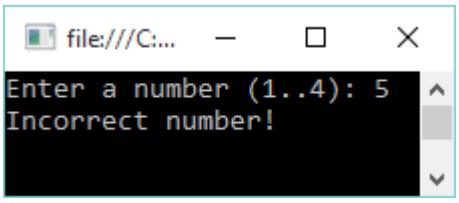
Assignment 1 (Console App)
Enter two numbers. Show the highest value ('highest value is: …') and show the lowest value ('lowest value is: …').



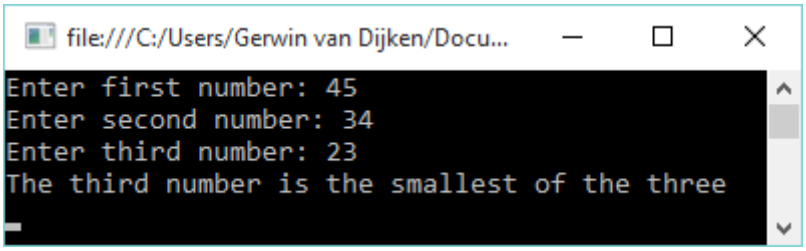


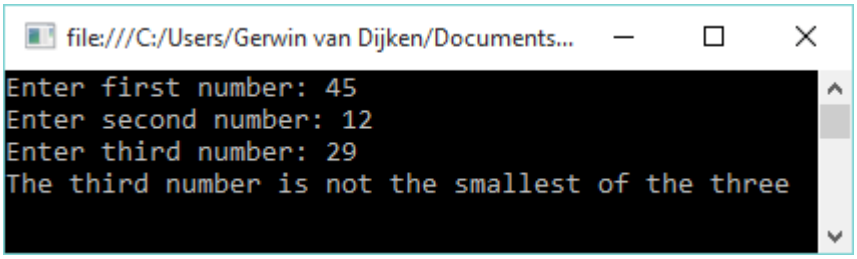
Assignment 2 (Console App)
Enter a number 1, 2, 3 or 4. Reject another value. Show the text 'clubs, 'diamonds', 'hearts' or 'spades' for 1, 2, 3 or 4 respectively. Use a switch statement (*so don't use if-else*).



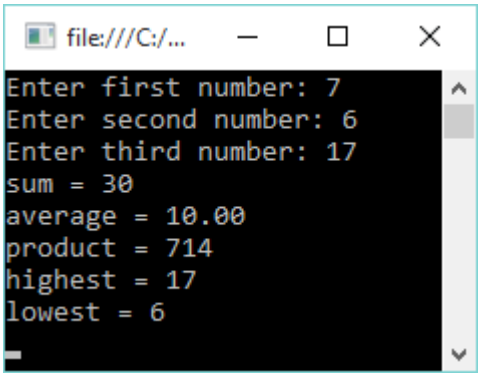


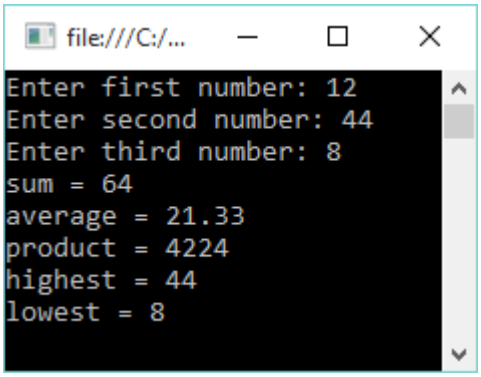
Assignment 3 (Console App)
Enter three numbers. If the first two are both greater than the third, show 'The third number is the smallest of the three', otherwise show 'The third number is not the smallest of the three'.



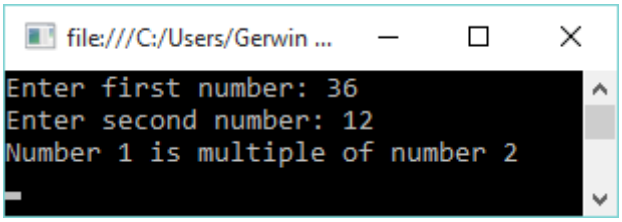


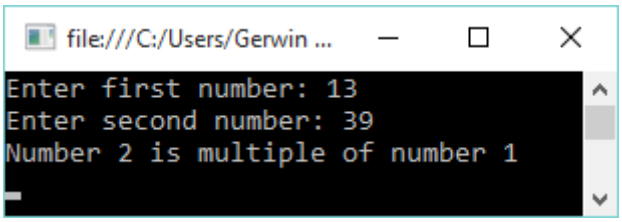
Assignment 4 (Console App)
Enter three numbers. Show the sum, average, product, highest and lowest of the numbers.

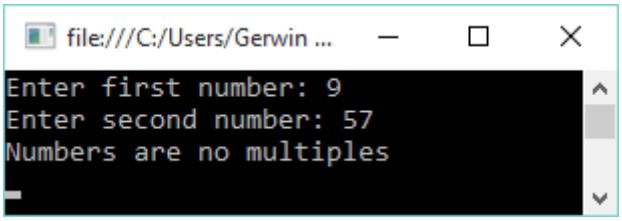




Assignment 5 (Console App)
Enter two numbers. Determine and show whether one number is a multiple of the other number.



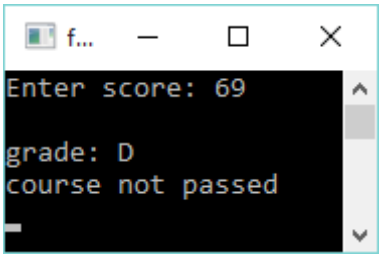


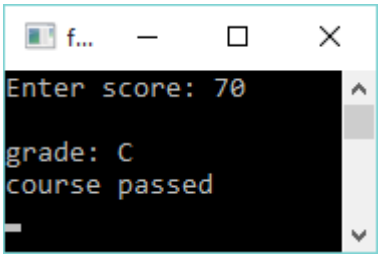


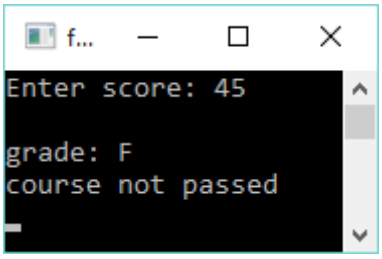
Assignment 6 (Console App)
Letters such as A, B, C, D and F are used in the US education system.

- A = 90-100 points
- B = 80-89 points
- C = 70-79 points (or CR)
- D = 60-69 points
- F = fewer than 60 points

Grade 'A', 'B' and 'C' represents a pass and the student has successfully completed the course.
Enter the score and state which letter a student will be given as output.
In addition, state whether or not the student has passed the subject.



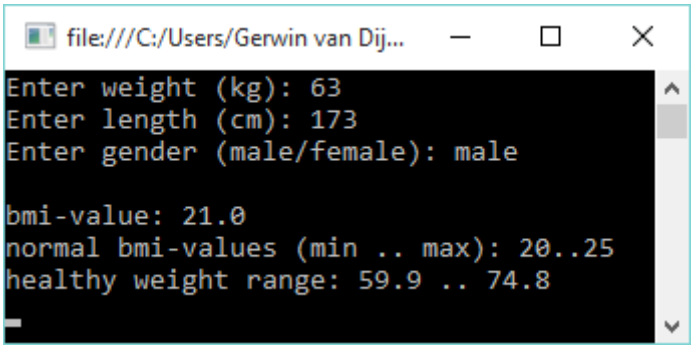


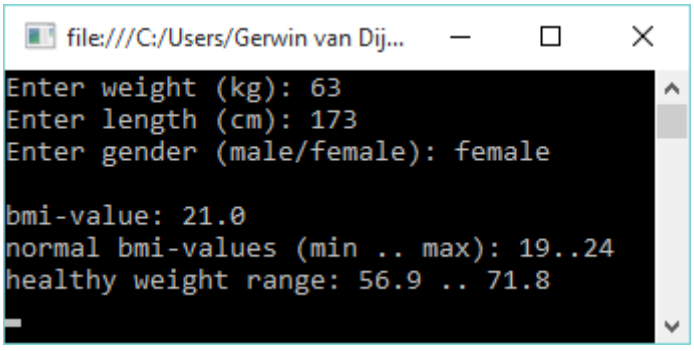


Assignment 7 (Console App)
A dietitian consults tables on a daily basis indicating how much a male or a female of a certain height should weigh. The Body Mass Index (BMI) is recommended for measuring the amount of body fat. Because the BMI takes height into account, it is a more accurate measure of total body fat than body weight in itself.

- BMI = body weight (kg) / square of height (cm/100) (= kg / $(cm/100)^2$)
- Male: normal value 20 to 25, healthy weight between $20\times(cm/100)^2$ and $25\times(cm/100)^2$
- Female: normal value 19 to 24, healthy weight between $19\times(cm/100)^2$ and $24\times(cm/100)^2$

Enter the weight, length and gender. Then calculate and display the BMI. Also show the normal BMI values (for the gender entered), and show between which values the 'healthy' weight falls for the length stated.

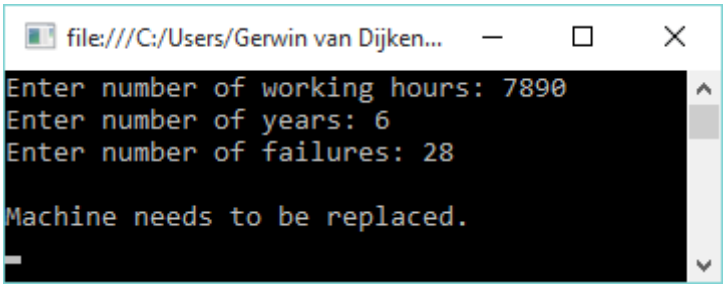


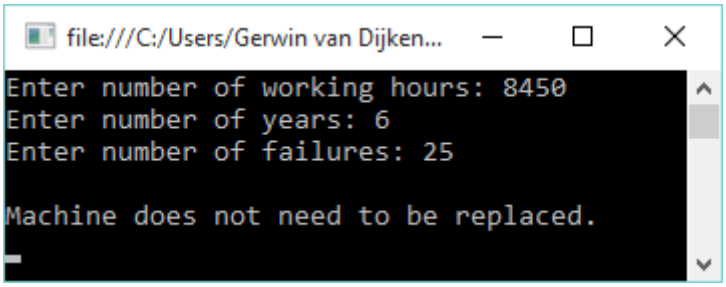


Assignment 8 (Console App)
A metal turning lathe will be replaced by a new lathe at the end of the year if one or more of the following conditions have been met:

- more than 10,000 working hours
- 7 years old or more
- more than 25 failures a year

Enter the necessary data. You must show whether the turning lathe needs to be replaced.



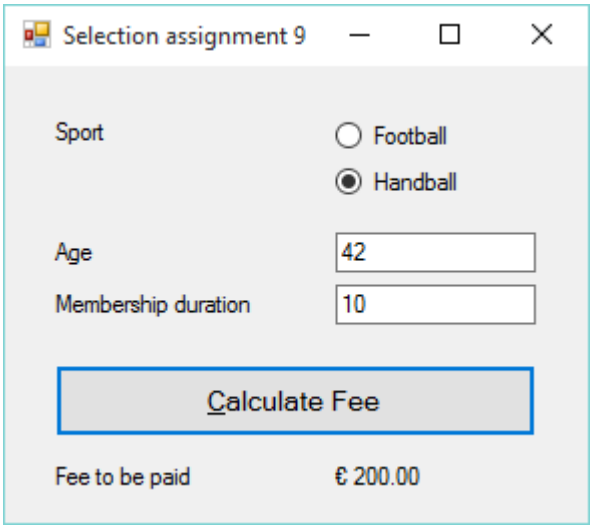


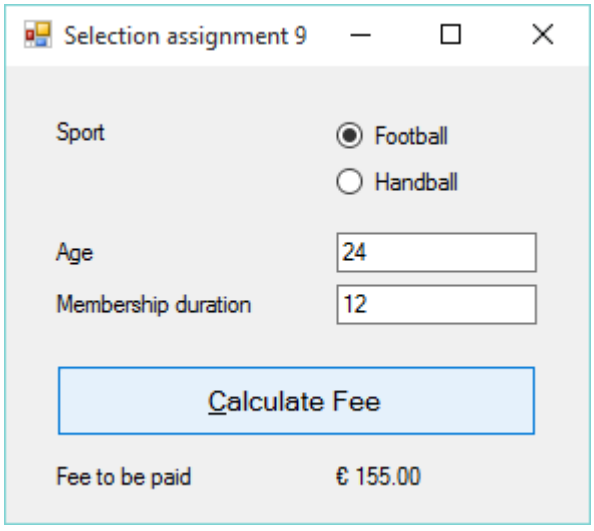
Assignment 9 (Windows Forms App)
The contribution fee for a sports association depends on the sport practised, the person's age and the number of years of membership. Situation:

- the membership fee for football is €175 and €225 for handball
- people over 40 receive €25 discount
- members who have been members for over 10 years receive €20 discount

Enter: type of sport (football or handball), age and membership duration.
Show the membership fee to be paid.

NB: Use radio buttons to determine the type of sport.





Assignment 10 (Windows Forms App)

Calculate the price of a cinema ticket as follows:

- the basic price is €12 (make it a constant value).
- enter the age.
- under 5 years: free
- from 5 to 12 years: half price
- from 13 to 54 years: full price
- from 55 years: free

Show the price of a cinema ticket.