

The exam is taken without any material beside writing material, and in silence. Answer the following questions and problems, trying to be as clear and as accurate as possible. Take the time to read carefully the statements before trying to answer them. You can write on the back of your test, in which case you're asked to indicate it clearly. This exam has 3 problems, for a total of 100 points.

**Problem 1.** Write a program that asks the user their name, their age (in years), and displays at the screen the name they entered, followed by their age in days. You should consider that a year is 365.25 days, to account for leap years, but display only a whole number. \_\_\_\_\_/25 p.

Two examples of execution, where the user input is underlined, and hitting "enter" is represented by ↵, are:

Enter your name, followed by enter.  
Baby Blue ↵  
Enter your age, followed by enter.  
1 ↵  
Baby Blue, you are 365 days old!

Enter your name, followed by enter.  
Mary ↵  
Enter your age, followed by enter.  
5 ↵  
Mary, you are 1826 days old!

```
using System;  
class Welcome{  
    static void Main(){
```

```
    }  
}
```

**Problem 2.** In this problem, we want to implement an Account class, to represent bank accounts. A (simplified) \_\_\_\_\_/  
account has two attributes: 55 p.

- A name (the name of the holder),
- A balance (in dollars and cents).

We want to have a get and a set method for each attribute, and three additional methods:

- A custom constructor that takes two arguments, one for each attribute,
- An “ApplyInterest” method that apply an interest rate of 3.250% to the balance,
- A “ToString” method that returns a string containing the name of the holder and the current balance, nicely formatted.

Write the full implementation of this class, including the two attributes and the 7 methods. Your class should be such that the following code:

```
Account yourAccount = new Account("Thomas", 1000M);  
yourAccount.ApplyInterest();  
Console.WriteLine(yourAccount.ToString());
```

would compile properly and results in displaying at the screen “Thomas, you have \$1,032.50 on your account”.



**Problem 3.** Answer the following short questions:

\_\_\_\_\_/20 p.

1. Give three keywords.

2. Evaluate the following expressions (you can indicate the intermediate steps if you want):

```
1 + 2 * 3
```

```
2 - 3 + 2 % 4
```

```
4 / 2 + 1 * 7
```

3. What is the name of the method used to convert a string like "3.40" into a double?

4. Write a statement that initializes a constant for the number of days in a week.

5. How can you assign a decimal value to a double variable?