

Saturday Lab 28th April

Software Development HDSWD

Object Oriented Programming Basics Part 1

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Problem 1: Create a program that stores your age as an **integer**. The program will then calculate how many days since you have been born (roughly). Create a second **integer** to hold the number of days in a year, assume it is always 365. Calculate the amount of days since you were born and print it to the standard output with a message. i.e.

```
//declaring and initializing variables for age and amount of days in a year
int age = some value;
int daysInYear = 365;

//calculation to get number of days since i was born (roughly)
int daysInAge = some calculation;
System.out.println("The amount of days for your age is:");
System.out.println(daysInAge);
```

Problem 2: Expand your solution to problem 1. We want to find out how many days since you were born have been during the weekend. Create a **double** variable to calculate the percentage of a week the weekend takes up. In your calculation make sure to add decimals to your numbers because we want all of the extra precision. i.e. **2.0 / 7.0** instead of **2 / 7**. Create a second **double** variable and use it to store the result of the calculation to find the number of weekend days there have been in your whole life. Print the results to the standard output along with a message like so:

```
//printing weekend days in my life
System.out.println("The number of days in your age that are weekends is:");
System.out.println(numberOfWeekendDays);
```

Problem 3: Create a program that stores your phone number (without the leading zero) as an **integer** variable called **phone**. Run two operations on your phone number, printing the results after each.

1. Find what your phone number is when squared (`phone * phone`)
2. Find the remainder of your phone number when you divide by 5 (use the **modulus** operator)
3. Try changing the data type of the phone variable to be **long** and re run the application. You should see a difference in the squared value. This is because squaring your phone number produces a huge number and **int** cannot hold all the numbers whereas **long** can.