

# Week 05

## User defined function

Cảm ơn thầy Trần Duy Quang đã cung cấp template cho môn học



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# 1

## Content

Programming is the process to write a program / an application.

Specifically, programming includes 4 steps:

- Step1: Understanding your problem.
- Step 2: Designing an algorithm.
- Step 3: Writing source code.
- Step 4: Packaging source code files into an executable file, a website, an apk, or an ipa file.

In this lab, we practice to write source code in C++.

# 2 Assignments

If you create wrong names, DO NOT RENAME, just delete and create a new one.

A: YY: 03.

H: YY: 12 => P41 → P80 + P100, P101

Write at least 1 function for each problem below

Write a main() function, which a menu that allows user to choose a problem to be executed

If that user chooses 0, exit the program

In summary, in this week

1 solution, named 19127001\_W05

1 project, named 19127001\_W05

>= 10 functions, for 10 problems below

3 files, Function.h, Function.cpp, main.cpp

1 menu

1 main function

No print/cout, scanf/cin in your defined functions are allowed

Last digit(your student id) == 1, 5, 9 → P41, P45, P49, P53...

Last digit(your student id) == 2, 6 → P42, P46, P50, P54...

Last digit(your student id) == 3, 7 → P43, P47, P51, P55...

Last digit(your student id) == 0, 4, 8 → P44, P48, P52, P56...

Nested loops, pow() functions are not allowed.

1. P100: solve  $ax^2 + bx + c = 0$

```
int solveQuadratic(double a, double b, double c, double &x1, double &x2);
```

2. P101: find next day (tomorrow)

```
void tomorrow(int day1, int month1, int year1,
               int &day2, int &month2, int &year2);
```

~~Draw flowcharts and write source codes in C++.~~

Design at least 3 test cases for each program.

```
// <YOUR STUDENT ID>
```

```
// <YOUR FULL NAME>
```

```
// <YOUR CLASS>
```

```
// Test case 1
```

```
// Input:
```

```
// Output:
```

```
// Test case 2
```

```
// Input:
```

```
// Output:
```

```
// Test case 3
```

```
// Input:
```

```
// Output:
```

```
int main(){  
    return 0;  
}
```