Computing I – Programming Labs

Problem Set 1

Problem 1

Write a program that prompts a user to enter two integer numbers. Read in the numbers and calculate sum, difference, product, and quotient. Output the results as shown below.

```
Enter two integers: 4 3
The sum is 7
The product is 12
The difference is 1
The quotient is 1
```

Problem 2

Write a program that prompts a user to enter two integer numbers. Read in the numbers. Output the larger of the two numbers followed by "is larger". If the numbers are equal, please print "These numbers are equal." Follow the screen shots below.

```
Enter two integers: 24 59
59 is larger.
```

```
Enter two integers: 10 10
These numbers are equal.
```

Problem 3

Write a program that prompts a user to enter the radius of a circle (as an integer number). The program should then calculate the diameter, the circumference, and the area. The results are to be printed to screen. Use 3.14159 for the constant pi. Your output should resemble the screen shot shown below.

```
Enter the circle radius: 2
Diameter is 4
Circumference is 12.5664
Area is 12.5664
```

Problem 4

Write a program that reads three numbers from the keyboard. Based on these three numbers, the sum, the average, and the product are to be calculated. Finally, also find the smallest and the largest of the three numbers. Display the results as shown below.

```
Input three different integers: 1 2 3
Sum is 6
Average is 2
Product is 6
Smallest is 1
Largest is 3
```

Note

To prevent that Visual Studio closes the console immediately after a program has finished, you need to set up the command **Set Console (/SUBSYSTEM:CONSOLE)** in **Linker Options**. (https://stackoverflow.com/questions/454681/how-to-keep-the-console-window-open-in-visual-c)

To accomplish this, proceed as follows (see also pictured displayed below):

1. Right-click on project name.

2. Select Properties from context menu.

3. Select Configuration Properties>Linker>System.

4. Click into the drop-down-box to the right and the choose "Console (/SUBSYSTEM:CONSOLE)"

5. Select Apply and then OK.

Solution 'Project4' (1 project)

Project4

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	Build
	Rebuild
	Clean
	View ▶
	Analyze ▶
	Project Only ▶
	Retarget Projects
	Publish Stored Procedures
	Scope to This
	New Solution Explorer View
	Show on Code Map
	Profile Guided Optimization ▶
	Build Dependencies ▶
	Add ▶
	Class Wizard... Ctrl+Shift+X
	Manage NuGet Packages...
	Set as StartUp Project
	Debug ▶
	Source Control ▶
	Cut Ctrl+X
	Paste Ctrl+V
	Remove Del
	Rename
	Unload Project
	Rescan Solution
	Open Folder in File Explorer
	Properties Alt+Enter

Solution Explor

Properties

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Project Depe

Project File

Root Names

Project4 Property Pages   ?   ✕

Configuration: Active(Debug) ⌄   Platform: Active(Win32) ⌄   Configuration Manager...

- ▲ Configuration Properties
  - General
  - Debugging
  - VC++ Directories
  - ▷ C/C++
  - ▲ Linker
    - General
    - Input
    - Manifest File
    - Debugging
    - System
    - Optimization
    - Embedded IDL
    - Windows Metadata
    - Advanced
    - All Options
    - Command Line
  - ▷ Manifest Tool
  - ▷ XML Document Generator
  - ▷ Browse Information
  - ▷ Build Events
  - ▷ Custom Build Step
  - ▷ Code Analysis

SubSystem	
Minimum Required Version	Not Set
Heap Reserve Size	Console (/SUBSYSTEM:CONSOLE)
Heap Commit Size	Windows (/SUBSYSTEM:WINDOWS)
Stack Reserve Size	Native (/SUBSYSTEM:NATIVE)
Stack Commit Size	EFI Application (/SUBSYSTEM:EFI_APPLICATION)
Enable Large Addresses	EFI Boot Service Driver (/SUBSYSTEM:EFI_BOOT_SERVICE_DRIVER)
Terminal Server	EFI ROM (/SUBSYSTEM:EFI_ROM)
Swap Run From CD	EFI Runtime (/SUBSYSTEM:EFI_RUNTIME_DRIVER)
Swap Run From Network	POSIX (/SUBSYSTEM:POSIX)
Driver	Not Set

SubSystem
The /SUBSYSTEM option tells the operating system how to run the .exe file.The choice of subsystem affects the entry point symbol (or entry point function) that the linker will choose.

OK   Abbrechen   Übernehmen

Project4 Property Pages   ?   ✕

Configuration: Active(Debug) ⌄   Platform: Active(Win32) ⌄   Configuration Manager...

- ▲ Configuration Properties
  - General
  - Debugging
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SubSystem	Console (/SUBSYSTEM:CONSOLE)
Minimum Required Version	
Heap Reserve Size	
Heap Commit Size	
Stack Reserve Size	
Stack Commit Size	
Enable Large Addresses	
Terminal Server	
Swap Run From CD	No
Swap Run From Network	No
Driver	Not Set

SubSystem
The /SUBSYSTEM option tells the operating system how to run the .exe file.The choice of subsystem affects the entry point symbol (or entry point function) that the linker will choose.

OK   Abbrechen   Übernehmen