King Fahd University of Petroleum and Minerals Information & Computer Science Department ICS 103 – Computer Programming in C Summer Semester 2008 (073)

Lab # 1 (INTRODUCTION)

Objective:

- 1. How to use Windows, Microsoft Visual C++ 6.0 and Turbo C
- 2. How to Download and print files from a Webpage (local.ccse.kfupm.edu.sa/~raharja/freetc20.zip)
- 3. To encourage students to install Turbo C++ in their home PCs

Scope:

The student should know the following:

- 1. Logon and Logoff
- 2. Launch and Close an application
- 3. Microsoft Visual C++ 6.0 and Turbo C Integrated Environment
- 4. Edit, Compile and Run C programs
- 5. How to download files from WebPages and how to print them

Discussion:

1. To run Microsoft Visual C++ 6.0, click the followings:

Start \rightarrow All Programs \rightarrow Microsoft Visual Studio 6.0 \rightarrow Microsoft Visual C++ 6.0

The following screen will appear:



2. Then, click the menu File \rightarrow New:

Eile	<u>E</u> dit <u>V</u> iew	Insert	Pro	oject	Build
D	<u>N</u> ew	Ctrl+N		26	3 2
B	Open	Ctrl+O		-	663.U.
	⊆lose			11	
	Open <u>W</u> orks	pace			
	Sa <u>v</u> e Works	Dace			
	Close Wor <u>k</u> s	pace			
	Save	Ctrl+S			
	Save As				
Ø	Save All				
	Page Setup.	10. ⁻			
	Print	Ctrl+P			
	Recent <u>Files</u>		×		
	Recent Wor	kspaces	۲		
	Exit				

The following dialog box will appear:

📲 ATL COM AppWizard	🔊 Win32 Static Library	Project name:
🔜 Cluster Resource Type Wizard		
Custom AppWizard		Location:
📾 Database Project		2.1ST 770000
DevStudio Add-in Wizard		2.131710033
Extended Stored Proc Wizard		
Makefle		C
MEC ActiveX ControlWizerd		Lreate new workspace
MEC AppWizard (dll)		Add to current workspace
MFC AppWizard (exe)		Dependency or.
New Database Wizard		· · · · · · · · · · · · · · · · · · ·
T Utility Project		
Win32 Application		-
Win32 Console Application >		Platforms:
Win32 Dynamic-Link Library		IWIN32
<	3	× .

- 3. Select Win32 Console Application.
- 4. Set the Location to your directory (e.g. Z:\ST778899).
- 5. Set the Project name (e.g. Lab0)
- 6. Then click the button **OK**.

The following dialog box will appear:

Win32 Console Application	Step 1 of 1 🛛 🕐 🔀
	 What kind of Console Application do you want to create? An empty project. A simple application. A "Hello, World!" application. An application that supports MFC.
< Back	k Next> Finish Cancel

- 7. Select the option: An empty project.8. Press the button Finish.
- 9. Select the menu **Project** \rightarrow **Setting**

🦇 LABO - Microsoft Visu	ial C++ - [LABOa.CPP *]
Eile Edit View Insert	Project Build Tools Window Help
	Set Active Project Add To Project
	Dependencies
	Settings Alt+F7
	Export Makefile
	Insert Project into Workspace
	<pre>int main(void){ double radius, volume; printf ("enter the radius scanf ("%lf", &radius); volume = 4.0 × 3.0 * PI * printf ("the radius of th printf ("the volume of th return 0; } }</pre>

Then the following dialog box will appear:

Project Settings	? 🛛
Settings For: Win32 Debug	General Debug C/C++ Link Resourc(• • Category: Precompiled Headers • Beset • Not usi General • Beset • Not usi C++ Language • Beset • Automa Code Generation • Eeset • Automa Code Generation • • • Dutimizations • • • • Create Precompiled Headers • • • Preprocessor • • • • Lise precompiled header file (.pch) • • • • Through header: • • • Project Options: • • • • //nologo /MLd /w3 /Gm /GX /ZI /Od /D ''WIN32'' /D ''_ • • • //nologo /MLd /w3 /Gm /GX /ZI /Od /D ''WIN32'' /D ''_ • • • //nologo /MLd /w3 /Gm /GX /ZI /Od /D ''WIN32'' /D ''_ • • • //nologo //L // // // • • • •
	OK Cancel

- 10. Select the Tab C/C++.
- 11. Select the Category: **Precompiled Headers**.
- 12. Select the option: Not using precompiled headers.

Settings For: Win32 Debug	 General Debug C/C++ Link Resourc Category: Precompiled Headers Not using precompiled headers Automatic use of precompiled headers Through header: Create precompiled header file (.pch) Through header:
	C Use precompiled header file (.pch) Through header: Project Options:
	/nologo /MLd /W3 /Gm /GX /ZI /Od /D ''WIN32'' /D '' DEBUG'' /D '' CONSOLE'' /D '' MBCS'' /Fo''Debug/'' /Fd''Debug/'' /FD /GZ /c

- 13. Press the button OK.
- 14. Select the menu **Project** \rightarrow **Add to project** \rightarrow **New**.

🐲 Lab07 - Microsoft V	/isual C++		
Lab07 - Microsoft Eile Edit View Insert Image: Second state Image: Second state Image: Second state </th <th>Visual C++ Project Build Iools Window Help Set Active Project Add To Project Dependencies Settings Alt+F7 Export Makefile Insert Project into Workspace</th> <th colspan="2">New New Folder Files Data Connection</th>	Visual C++ Project Build Iools Window Help Set Active Project Add To Project Dependencies Settings Alt+F7 Export Makefile Insert Project into Workspace	New New Folder Files Data Connection	

The following dialog box will appear:

New	? 🛛
Files Projects Workspaces Other Document Active Server Page Binary File Binary File Bitmap File C/C++ Header File C++ Source File Cursor File Cursor File HTML Page Icon File Resource Script Resource Template SQL Script File Text File Text File	s ✓ Add to project: LAB0 File <u>name:</u> LAB0 Logation: Z:\ST778899
	OK Cancel

- 15. Select the item **C++ Source File**.
- 16. Set the Location with your working directory.
- 17. Set the File name (e.g LAB0.CPP).

Now you are ready to type the C-program.

18. To compile your C-program, select the menu **Build** \rightarrow **Build**.

🐲 LABO - Microsoft Visual C++ - [LABOa.CPP *]			
Eile Edit View Insert	Project	Build Tools Window Help	
12 🕞 🖬 🕼 🐇 🗉	BR.	Compile LABOa.CPP Ctrl+F7	
(Globale)		Build LABO.exe F7	
	/* [/*]	Batch Build Here */	
	#inc #inc #def	Start Debug Debugger Remote Connection	
	int doul	Execute LABO.exe Ctrl+F5	
	prii scai volu prii prii	Set Active Configuration); Configurations (radius, 3) Profile here is %, here is %, here is %.	
	retu }	rn u,	
Clas FileV			

19. To execute the program select the menu **Build** \rightarrow **Execute**.

Exercises:

```
1.
     Type the following program:
/* Volume of a sphere */
/* ICS103 Lab#0 by: Your Name Here */
#include <stdio.h>
#include <math.h>
#define PI 3.14159
int main(int argc, char* argv[]){
  double radius, volume;
  printf ("enter the radius > ");
  scanf ("%lf", &radius);
  volume = 4.0 / 3.0 * PI * pow(radius,3);
  printf ("the radius of the sphere is %.2f\n", radius);
  printf ("the volume of the sphere is %.2f\n", volume);
  return 0;
}
2.
     Save the program with the name LAB0Q1.CPP
```

3. Compile, Link, Run, and Test the program