# Exercise 3 Introduction to C Programming Language

1. Launche Microsoft Visual C++ 6.0

 $\label{eq:click on Start} \boxdot \text{Programs} \rightarrow \text{Microsoft Visual Studio 6.0} \rightarrow \text{Microsoft Visual C++ 6.0}$ 

- 2. Create a new project
- $\ensuremath{\boxtimes}$  Click on File  $\rightarrow$  New in the toolbar.
- ☑ In the new window that pops up, select the **Projects** tab. Select **Win32 Console Application** in the list. On the right hand side, type in *Welcome* in the **Project Name** field.

✓ In Location field select the directory of your group (i.e. E:\Students\AF\GroupX).
 ✓ Click OK.

New	<u>?</u> ×
File       Projects       Workspaces       Other Documents         ATL COM AppWizard       Cluster Resource Type Wizard         Custom AppWizard       Database Project         DevStudio Add-in Wizard       DevStudio Add-in Wizard         ISAPI Extension Wizard       Makefile         MFC ActiveX ControlWizard       MFC AppWizard (dll)         MFC AppWizard (exe)       Win32 Application         Win32 Dynamic-Link Library       Win32 Static Library	Project name: Welcome Logetion. E:\Students\AF\GroupX • Croate new workspace • Add to current workspace • Dependency of: • Platforms:
	OK Cancel

Select An Empty Project and click Finish in the next window.

Win32 Console Application - Step 1	l 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.	
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3. Add a new source file to the project

 $\ensuremath{\boxtimes}$  Click on  $\ensuremath{\textbf{File}} \to \ensuremath{\textbf{New}}$  in the toolbar.

 $\ensuremath{\boxtimes}$  In the new window that pops up, select the Files tab. Select C++ Source File in the list.

☑ Enter the name of your source file **Welcome.c** in the **File Name** field.

## ☑ Click **OK**.

<ul> <li>Active Server Page</li> <li>Binary File</li> <li>C/C+ Header File</li> <li>C/C+ Header File</li> <li>Cursor File</li> <li>Cursor File</li> <li>HTML Page</li> <li>Icon File</li> <li>Macro File</li> <li>Resource Script</li> <li>Resource Template</li> <li>SQL Script File</li> <li>SQL Script File</li> <li>Text File</li> </ul>	New           Files         Projects         Workspaces         Other Documents	<u>?</u>
	<ul> <li>Active Server Page</li> <li>Binary File</li> <li>Bitmap File</li> <li>C/C Hosder File</li> <li>C++ Source File</li> <li>C++ Source File</li> <li>Chron File</li> <li>HTML Page</li> <li>Icon File</li> <li>Macro File</li> <li>Resource Script</li> <li>Resource Template</li> <li>SQL Script File</li> <li>Text File</li> </ul>	✓ Add to project:         Welcome         File name:         Welcome.c         Logation:         E:\Students\AF\GroupX

4. Enter the source code that prints the sentence: Hi! Welcome at the TU!

```
#include <stdio.h>
int main ()
{
    printf ("Hi! Welcom")
```

```
printf ("Hi! Welcome at the TU!\n");
return 0;
```

}

5. Compile and link the program

# Click on Build/Rebuild All

If it compiles and links successfully, the window at the bottom of your screen will display 0 error(s), 0 warning(s)

6. Run the program

#### ☑ Click on Build/Execute Wercome.exe

The output window displays:

#### Hi! Welcome at the TU!

When you press any key, the window will be taken down and the program will stop.

7. Save the project

Click on File/Save All.

8. Try to call the function **printf** like

# printf ("Hi! Welcome at the TU!

");

9. Compile and run the program.

10. Experiment to find out what happens when printf's argument string contains \a.

## printf ("Hi! Welcome at the TU!\a");

- 11. Compile and run the program.
- 12. Add a new source file to the project with a name **Welcome1.c** and enter the following code:

#### #include <stdio.h> int main ()

```
{
    printf ("Hi! ");
    printf ("Welcome ");
    printf ("at ");
    printf ("the ");
    printf ("TU!");
    printf ("\n");
    return 0;
```

}

13. Compile and run the program.

14. Add a new source file to the project with a name **Velocity.c** that converts the velocity from miles per hour into kilometers per hour, where 1 mile = 1.60934 kilometers (km).

```
#include <stdio.h>
#define MILES_INTO_KILOMETERS 1.60934f /* Conversion constant */
int main ()
{
    float velocity_mph, velocity_kmph;
    printf ("Enter the velocity of the aircraft [miles/hour]: ");
    scanf ("%f", &velocity_mph);
    velocity_kmph = MILES_INTO_KILOMETERS * velocity_mph;
    printf ("The velocity of the aircraft = %.3f [km/h]\n", velocity_kmph);
    return 0;
}
```

- 15. Compile and run the program.
- 16. Close the project
- Click on File/Close Workspace.