King Saud University
Collage of Applied Medical Sciences
Biomedical Technology Department

BMT485
Level9
Lab3

Introduction to C language

Objectives

Upon completion of this lab you'll be able to understand the following points

1. **The basic structure of the C language program**
2. **Compile, Run, Debug, Make, and single step in your program**
3. **Save and Open your program files**
4. **files that is used by C language programs**
5. **the .h files, .cpp files, .obj files, and .exe**
6. **some C function**
7. **how to use BorlandC++ help**

Introduction

This lab gives an overview of how to start your C language IDE and to be familiar to. Also it serves as a comprehensive introduction to the C programming language and some useful C functions and sub programs

Pre-requisite

"Subjects to be understood before launch this lab"

No special pre-requisites are needed.

Required equipments

- **PC and BorlandC under DOS**

Experiment steps

- **C files and how to construct a proram**
  "scan page 12 of the C book "
- **Lunch the IDE and start your first programs**
- **Explain on the IDE how to save and retrieve the stored programs**
- **Explain the first program, how to compile, run, see the output screen, debug and single step**
- **How to make the .EXE file**
- **Explain the different data types and how to get use of it "int, char, float, double, unsigned, signed, "**
- **printf function "%c print single character**
  %s print string
  %d print signed decimal integer
  %f print float point decimal notation
  %e floating point exponential notation
  %g floating point(%f or %e, whichever is shorter)
  %u print unsigned decimal integer
  %x print unsigned hexadecimal integer
  %o print unsigned octal integer
  \n print new line
  \t print Tab character"
- **scanf function**
- **Explain what is wrong with the scanf function and how to correct it**
- **Arithmetic operators "+, -, *, /, %"**
- **Relational operator "<, >, <=,>=,==,!="**

Read the parallel port addresses from the BOIS data area

```
#include <stdio.h>
#include <dos.h>
void main (void)
{
unsigned int far *ptraddr;/* Pointer to location of Port Addresses */
unsigned int address; /* Address of Port */
int a;
ptraddr=(unsigned int far *)0x00000408;
for (a = 0; a < 3; a++)
{
address = *ptraddr;
if (address == 0)
printf("No port found for LPT%d \n",a+1);
else
printf("Address assigned to LPT%d is %Xh\n",a+1,address);
*ptraddr++;
}
}
```