

Modern Programming Languages (CS508)
SPRING 2012
Assignment No. 1

Total Marks: 20

Dead line: April 13, 2012

Uploading instructions:

- Your assignment must be in .doc format.(Any other formats like scan images, PDF, Zip, rar, bmp, docx etc will not be accepted)
- Save your assignment with your ID (e.g. bc020200786.doc).
- No assignment will be accepted through email.

Rules for Marking:

It should be clear that your assignment will not get any credit if:

- The assignment is submitted after due date.
- The submitted assignment does not open or file is corrupted.
- Your assignment is copied from internet, handouts or from any other student (Strict disciplinary action will be taken in this case).

Note:

- Your answer must follow the below given specifications. **Marks will be deducted if you do not follow these instructions.**
 - Font style: "Times New Roman"
 - Font color: "Black"
 - Font size: "12"
 - **Bold** for heading only.
 - Font in *Italic* is not allowed at all.
- You should consult recommended books to clarify your concepts.
- It's better for you to submit the assignment well before the deadline.
- Do not put any query at MDB about this assignment, if you have any query then email at cs508@vu.edu.pk.

Purpose of Assignment:

Intended purpose of this assignment is to give students an exercise that can facilitate them while working in any professional software development environments. After attempting this assignment students will be able to:

- Familiarize with the core concept of choosing language Paradigms
- Learn language evaluation Factors and techniques.
- Students will get comprehensive understanding of an important programming language concept i.e Orthogonality.

Application:

AlstraSoft E-Friends

Scenario:

Suppose you are developing an online first-degree friendship building social network for **E-friends** application at **Alstrasoft Pvt Ltd** that strive to be the premier provider of web-based software solutions for businesses worldwide. As a web development and software company, Alstrasoft specialize mainly in web design and software programming.

Evaluation:

Now being a senior Software Developer at this company where portability is the prime concern of your management, you are required to answer following questions keeping in view the above constraints.

- a) Which programming language among **Java and C++** will be preferred by you in this programming paradigm keeping portability a major concern for your company? State your answer with solid reasons? [5]
- b) Beside portability what other **factors** should be considered for language of choice in above scenario, to give better productivity in e-Business and to enable customers to start their own online business with ease and generate an extra stream of revenue. [10]
- c) While working in same programming environment you came across following piece of code implemented in **C++**.from the following code infer if it is following the principle of orthogonality or not? Justify your answer. [5]

```

#include <iostream.h>
#include <stdio.h>
# include <conio.h>
using namespace std;

int main() {
char a[80];
char b[80]; int i, j;
cout << "Enter a sentence: ";

gets(a); // Read a token at a time from the string.


for(i=0;; i++) { /* Read characters until either a space or the null
terminator is encountered. */

for(j=0; a[i]!=' ' && a[i]; j++, i++)

b[j] = a[i];

b[j] = '\0'; // null terminate the token

b[j] = '\0'; // null terminate the token

cout << b << '\n';

if(!a[i])
break;

}
getch();

return 0;
}

```