

UNIVERSITY OF LAGOS
FACULTY OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
EEG 311: COMPUTER PROGRAMMING LANGUAGES II
FIRST SEMESTER, 2010/2011 ACADEMIC SESSION
SECOND MID-SEMESTER EXAMINATION

Instructions: 1. Answer ALL questions

2. *Build all your programs in a multifile organizational scheme*

Time Allowed: 60 minutes

Question One

Write a structure tag and short main program that sets up a struct for a University student that contains his name, cumulative grade point average (CGPA), and university . In the program, declare one pitcher variable and pass its address to a function called Smokin'. This function fills the pitcher variable with the following information:

Name: Emmanuel Okocha

CGPA: 4.70

University: University of Lagos

Once the data is in the structure, write the pitcher information to the screen.

Question Two

Write a program that sets up an overloaded function set called GetRandomNum. These functions return a random number that is generated with stdlib.h's srand() and rand(). You will need to use the modulus function to do a little math to obtain the desired results. There are three different prototypes for the GetRandomNum function:

- (i) Pass in a positive integer m and it returns an integer value between 0 and m-1.
int GetRandomNum(int m);
- (ii) Pass in two integers (assume i and j are zero or positive and i < j) and receive a random integer between but not including i and j.
int GetRandom(int i, int j);
- (iii) Void call returns a random number between 0.000 and 1.000. Assume that three digits of precision are necessary.
double GetRandom();

Your program should make three calls to GetRandom: once obtaining a number between 0 and 27, once obtaining a number between 3 and 73, and last obtaining a number between 0.0 and 1.0. Write all three numbers to the screen.