National University of Computer & Emerging Sciences, Karachi
Fall-2021
School of Computing
Lab Midterm
13th November 2021, 01:30 pm – 3:00 pm

Course Code: CL1002	Course Name: Programming Fundamentals
Instructor Name: Sandia Kumari	
Student Roll No: [redacted]	Section No: BCS-1K

Instructions:

- Return the question paper and make sure to keep it inside your answer sheet.
- Read each question completely before answering it. There are **3 questions and 2 pages**.
- In case of any ambiguity, you may make assumption. But your assumption should not contradict any statement in the question paper.
- You are **not allowed to write** anything on the question paper (except your ID and group).
- For Exam submission: Create a folder named **"your student-id" i.e. (K21-0100).** Paste the .c file for each question named as **Q1.c, Q2.c** and on so in that folder.

me: 90 minutes. **Max Marks**: 30 Points

PAPER TYPE B

estion no. 1 **[30 mins, 10 ints]**

diatric Doctor of Osteopathic wants a software solution for paediatric norms of children, uide parents about the height and weight deviation of their children. The software will be d to evaluate the status of the height and weight, taking into account each child's level of vth. Children are defined as deviating from height and weight norms if their height or ht are either lesser or greater than the age norm for their own age. Provided the standard es of height and weight norms you are required to design the application on C defining eparate functions for height and weight norms.

oximate Weight Per Age:

age is above 1 year [Weight in kg = (8 + (2 * years)]
age is below 1 year [weight in kg = (4 + (6*years)]
orn: 4 kg
ths: 7 kg
10 kg

imate height Per Age:

in cm = (75+ (7*years)]

Question no. 2 [30 mins, 10 Points]

Suppose you are on a scholarship for a master's program and the university gives you 10 euros on the first day, and on the second day you are given twice as much. If each day you are given twice as much money as on the previous day, then on day 15, how much money will you receive? Build a C program to find the solution.

Question no.3 [30 mins, 10 Points]

A group of students want to create an application that performs a Delphi estimation technique to estimate the time required for the development of software. This technique works in multiple rounds of group discussion by estimators. The following tables show the estimations performed by 3 Members in 3 rounds. The last round is considered as the final estimation so in order to calculate the total no. of days required to complete the project. You need to write a program to calculate the total no. of days in final round (Round 3) by Member 1, Member 2 and Member 3 also show the best and worst case of each task (A,B,C...,E).

Task	Member name: M1		
	Round1	Round2	Round3
A	3	3	3
B	3	3	4
C	6	6	6
D	3	3	3
E	5	2	2

Member name: M2		
Round1	Round2	Round3
4	4	4
6	5	5
2	5	5
3	3	3
1	1	2

Member name: M3		
Round1	Round2	Round3
7	7	7
8	3	3
7	6	5
2	2	3
2	2	2