SESSION PLANNING SHEET

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|  | SLG Leaders:  Arashdeep Singh | | Date:  31 March 2024 |
|  | Course: IPC144 | | Week #: 11 |
| OBJECTIVES: *What does the group most need to get out of this session?*: | | | |
| * The group needs a general quiz that checks the understanding of topics * The group needs some questions/situations to apply the topics * The group needs coding practice. | | | |
| CO-FACILITATION CHECKLIST: | | | |
| ☒ Check session plans in the Leader’s Manual for inspiration  ☒ Decide who will plan and lead each activity. What support do you need from your co-facilitator?  ☒ Prepare your PowerPoint session file  ☒ Check for accessibility & compatibility☒ Upload your session planning sheet to MS Teams ☒ Promote your session!  ☒ Promote your sessions! | | | |
| FACILITATOR | OPENING ACTIVITY:(*Consider the time of the semester, numbers anticipated, proximity of tests, etc.)* | | |
|  | Welcome everyone to Class!  Ask how everyone is doing, have them open their visual studio, tell me the topic they learned last week, add jamboard link in the zoom chat. | | |
|  | Content/Concept | Activity  *Align learning strategy to content; provide instructions for participants* | Collaborative Technique *How will participants work on this task together?* |
|  | ACTIVITY 1: | | |
|  | **Input/Output buffers** | Ask why do we need to clear input buffer ? How to do so?  Ask why do we need to clear output buffer ? How to do so?  How to print ‘, “, \, % ? | Have Google Jam/ zoom to get all the answers! |
|  | ACTIVITY 2: | | |
|  | Library  Functions | Create a C program that generates a random number between 1 and 100. For the generated number, perform the following operations and display the results on the console:  Round the number to the nearest integer.  Floor and Ceil (Ceiling) the number to demonstrate rounding down and up, respectively.  Truncate the number to remove the decimal part, if any.  Convert the number into a string. Iterate through each character of the string, and for each character:  Check if it is a digit using isDigit. If true, print the character.  Convert and print the character to uppercase using toUpper.  Convert and print the character to lowercase using toLower. | Google Jam Board. Working on their own. May collaborate with other student when stuck. |
|  | ACTIVITY 3: | | |
|  | Structures, Pointers, Functions, Input/Output | **Write a C program that defines a structure named Student containing the following fields: id (of type int), name (a string of 50 characters), and grade (of type float). Implement the following functionalities by defining appropriate functions that utilize pointers:  write a clear() function which clears the input buffer.**  **void inputStudent(Student \*s): Takes a pointer to a Student structure and allows the user to input details for id, name, and grade.**  void printStudent(const Student \*s): Takes a pointer to a Student structure and prints the details of the student in a readable format. |  |
|  | CLOSING ACTIVITY: | | |
|  | Hold a Light stop activity poll to check understanding of the participants. | | |
| POST-SESSION REFLECTION: | | | |
| Take 3-5 minutes to briefly summarize your session. You may address any of these questions:   * What went well? * What didn’t? * What did people say? * What would you do differently next time? * What content / learning strategies will you cover in your next session? | | | |
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Resources used:

1. [www.Intro2c.sdds.ca/A-Introduction](http://www.Intro2c.sdds.ca/A-Introduction)
2. Google Jam Board
3. Zoom
4. Strategy cards

Answers 2:   
#include <stdio.h>

#include <stdlib.h>

#include <ctype.h>

#include <math.h>

#include <time.h>

int main() {

// Initialize random number generator

srand(time(NULL));

// Generate a random number between 1 and 100

double randomNumber = 1 + rand() % 100;

printf("Random Number: %.2f\n", randomNumber);

// Round the number to the nearest integer

printf("Rounded: %.0f\n", round(randomNumber));

// Floor and Ceil the number

printf("Floor: %.0f\n", floor(randomNumber));

printf("Ceil: %.0f\n", ceil(randomNumber));

// Truncate the number

printf("Truncated: %.0f\n", trunc(randomNumber));

// Convert the number to a string - assuming a buffer large enough for the number and null-terminator

char str[10];

sprintf(str, "%.0f", randomNumber);

// Iterate through each character of the string

for(int i = 0; str[i] != '\0'; i++) {

char ch = str[i];

// Check if the character is a digit

if(isdigit(ch)) {

printf("Digit: %c\n", ch);

}

// Convert and print the character to uppercase

printf("Uppercase: %c\n", toupper(ch));

// Convert and print the character to lowercase

printf("Lowercase: %c\n", tolower(ch));

}

return 0;

}