ASSIGNMENT 4

ROCK PAPER SCISSOR

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#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#include <string.h> // Required for strcmp()

// Function to get the computer's choice based on a
random number
const char* get_computer_choice(int random_number) {
    if (random_number < 33) {
        return "Rock";
    } else if (random_number < 66) {
        return "Paper";
    } else {
        return "Scissors";
    }
}

// Function to determine the winner
void determine_winner(const char* user_choice, const
char* computer_choice) {
    if (strcmp(user_choice, computer_choice) == 0) {
        printf("It's a draw! Both chose %s.\n", user_choice);
    } else if ((strcmp(user_choice, "Rock") == 0 &&
strcmp(computer_choice, "Scissors") == 0) ||
            (strcmp(user_choice, "Paper") == 0 &&
strcmp(computer_choice, "Rock") == 0) ||
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        (strcmp(user_choice, "Scissors") == 0 &&
strcmp(computer_choice, "Paper") == 0)) {
      printf("You win! %s beats %s.\n", user_choice,
computer_choice);
   } else {
      printf("You lose! %s beats %s.\n", computer_choice,
user_choice);
   }
}

int main() {
   int user_input, random_number;
   const char* user_choice;
   const char* computer_choice;

   // Seed the random number generator
   srand(time(0));

   printf("Welcome to Rock-Paper-Scissors Game!\n");
   printf("Enter your choice:\n");
   printf("1. Rock\n");
   printf("2. Paper\n");
   printf("3. Scissors\n");
   printf("Your choice: ");
   scanf("%d", &user_input);

   // Map user's input to their choice
   switch (user_input) {
      case 1: user_choice = "Rock"; break;
      case 2: user_choice = "Paper"; break;
      case 3: user_choice = "Scissors"; break;
```

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        default:
            printf("Invalid choice. Please enter 1, 2, or 3.\n");
            return 1;
    }

    // Generate random number for computer's choice
    random_number = rand() % 100;
    computer_choice =
get_computer_choice(random_number);

    // Display choices
    printf("You chose: %s\n", user_choice);
    printf("Computer chose: %s\n", computer_choice);

    // Determine and display the winner
    determine_winner(user_choice, computer_choice);

    return 0;
}
```