WEEK 8 LAB TASK

QUESTION 1

#include <stdio.h>

#include <stdlib.h>

int calculateSum( float a, float b, float c ) {

printf( "The result is: %.2f\n", a + b + c );

return 0;

}

int main() {

float input[2];

char option[10];

/\* Take 1st input. \*/

printf( "1st number: " );

fflush( stdin );

fgets( option, 10, stdin );

input[0] = atof( option );

/\* Take 2nd input. \*/

printf( "2nd number: " );

fflush( stdin );

fgets( option, 10, stdin );

input[1] = atof( option );

/\* Take 2nd input. \*/

printf( "3rd number: " );

fflush( stdin );

fgets( option, 10, stdin );

input[2] = atof( option );

/\* Calculate result. \*/

calculateSum( input[0], input[1], input[2] );

return 0;

}

QUESTION 2

#include <stdio.h>

#include <stdlib.h>

/\* Calculate the sum. \*/

float calculateSum( float a, float b, float c ) {

return a + b + c;

}

/\* Take nth input. \*/

float inputNumber( int n ) {

char option[10];

if( n == 0 ) { printf( "1st number: " ); }

else if( n == 1 ) { printf( "2nd number: " ); }

else if( n == 2 ) { printf( "3rd number: " ); }

else { printf( "%dth number: ", n + 1 ); }

fflush( stdin );

fgets( option, 10, stdin );

return atof( option );

}

int main() {

float input[3];

/\* Store all of the inputs in the array. \*/

input[0] = inputNumber(0);

input[1] = inputNumber(1);

input[2] = inputNumber(2);

/\* Calculate result. \*/

printf( "The result is: %.2f\n",

calculateSum( input[0], input[1], input[2] ) );

return 0;

}

QUESTION 3

#include <stdio.h>

#include <stdbool.h>

#include <time.h>

#include <stdlib.h>

int main(void) {

srandom(time(NULL));

/\* Make a random number and return it. \*/

int generateRandom( int min, int max ) {

int result;

int modulo;

modulo = max - min + 1;

result = random() % modulo;

result = result + min;

printf( "You rolled a %d!\n", result );

return result;

}

/\* The player rolls a 6 sided die, if they roll an even number they win. \*/

if( generateRandom( 1, 6 ) % 2 == 1 ) {

printf("Odd, you lose.\n");

} else {

printf("Even, you win!\n");

}

return 0;

}

QUESTION 4

#include <stdio.h>

#include <stdbool.h>

#include <time.h>

#include <stdlib.h>

int main(void) {

srandom(time(NULL));

/\* Make a random number, return it. \*/

int generateRandom( int min, int max ) {

int result;

int modulo;

modulo = max - min + 1;

result = random() % modulo;

result = result + min;

printf( "You rolled a %d!\n", result );

return result;

}

/\* The player rolls a 6 sided die, if they roll an even number they win. \*/

int finalResult = generateRandom( 1, 6 ) +

generateRandom( 1, 6 ) +

generateRandom( 1, 6 ) +

generateRandom( 1, 6 ) +

generateRandom( 1, 6 );

printf( "The total is %d.\n", finalResult );

/\* Check result and announce it. \*/

if( finalResult % 2 == 0 && finalResult > 15 ) {

printf( "You win!\n" );

} else {

printf( "You lose.\n" );

}

return 0;

}

QUESTION 5  
  
#include <stdio.h>

#include <stdlib.h>

/\* Take an array of numbers and add them to each other. \*/

int sumArray( int a[], int size ) {

int i;

int result = 0;

for( i = 0; i < size; i++ ) {

result = result + a[i];

}

return result;

}

int main() {

int array[5] = {64, 23, 65, 41, 65};

/\* Print the result. \*/

printf( "%d\n", sumArray( array, sizeof( array ) / sizeof( \*array ) ) );

return 0;

}

SCREENSHOT

