MMCOE CE2: EEL ASSIGNMENT 2

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**RESEARCH**

We know that too much screen time is not good for children's developing brain. A 2020 study found that people who have been diagnosed with smartphone addiction had problems with the part of their brain responsible for transmitting messages and poorer cognitive performance.

As nowadays the youngsters are engaged into gaming, social media and watching videos. So, while researching criteria for screen time, especially for children and adolescents, it’s important to consider various guidelines and expert recommendations So, to limit their screen time we have developed a C program.

The websites to which we referred are:

Geeks for geeks-https://www.geeksforgeeks.org/

W3 schools -https://www.w3schools.com/

Reddit r\_c programing -https://www.reddit.com/r/C\_Programming/comments/9jxnfw/useful\_project\_ideas\_using\_c\_programming\_language/?rdt=55379

https://www.allaboutvision.com/conditions/refractive-errors/screen-time-by-age/

**ANALYSIS**

Our team has recognized and elucidated the problem well. Recent studies found that those spending six hours or more per day watching screens had a higher risk for depression, and this study found that limiting social media use to 30 minutes per day lead to a significant improvement in well-being. There is clear evidence that too much screen time can be detrimental to your health. Time spent on screens is time that people in past generations would spend being physically active—taking walks, working in a garden, playing sports, working on projects, etc. A sedentary lifestyle is directly linked to an increased risk of obesity and other physical health problems.

We have listed some criteria which enables the user to know the average time spent on the device and gets a rating according to it.

**IDEATE**

Through research and analysis, Adults should limit screen time outside of work to less than two hours per day. Any time beyond that which you would typically spend on screens should instead be spent participating in physical activity. This might not be feasible immediately, but there's still a lot people can do to try to reduce this down.

So, to limit the screen time and have active life our team has developed a code which is about the time spent by the user on each app and calculates the average time.

**BUILD**

We developed a program using control structures such as loops and conditional statements so that it can calculate the average time and give rating to each person according to the predefined rating system.

The program is built to know how much time the user is spending on device and it tells whether the user has limited screen time or how it can cause you a problem.

At first it asks for the number of device users. Then the number of apps you used in a day. How much time you spent on each app in hours and calculates the average time spent on device. On the basis of average time it determines the rating.

• If your total time is <=1, gives rating as “outstanding”.

•Total time is <=2, gives rating as “good”.

• Total time is <= 4, gives rating as “Spending too much time; it can affect your sleep cycle”.

• Total time <=5, gives rating as “Too much screen time can lead to physical health problems and anxiety”.

• Total time <=6, gives rating as “You're crossing your limit, it may become an addiction”.

**TESTING**

Our team wrote and tested this program in C language on Visual Studio Code. Testing was done to ensure that the program identifies all invalid and valid inputs.

When asked for time spent on each app, you cannot enter a number less than zero and it displays "Invalid input! Time cannot be negative. Please try again”. The code will not be executed further until you provide a valid input.

Testing showed that the program correctly identified the number of device users, apps used, time spent on each app and the rating on the basis of average time.

**IMPLEMENT**

Once testing was done it ensured that all the errors are eliminated. The program was set up and made ready for use on GitHub. Further the program can be extended or reformed to include additional criteria or how to reduce your screen time and take precautions as per the requirements.

PROGRAM CODE

#include <stdio.h>

#include <string.h>

int main() {

int num\_device\_user, num\_screentime;

float time\_spent, total\_time, avg\_time;

char rating[100];

// Asking the user for the number of device users

printf("Enter the number of device users: ");

scanf("%d", &num\_device\_user);

// Asking the user for the number of apps used

printf("Enter the number of apps you used today: ");

scanf("%d", &num\_screentime);

for (int i = 1; i <= num\_device\_user; i++) {

total\_time = 0; // Reset total time for each user

printf("\nPerson %d:\n", i);

for (int j = 1; j <= num\_screentime; j++) {

// Get time spent on each app and check for invalid input

do {

printf("Enter time spent on APP %d (in hours): ", j);

scanf("%f", &time\_spent);

if (time\_spent < 0) {

printf("Invalid input! Time cannot be negative. Please try again.\n");

}

} while (time\_spent < 0); // Keep asking until valid input is provided

total\_time += time\_spent; // Accumulate total time

}

// Calculate average time spent on device

avg\_time = total\_time / num\_screentime;

// Determine the rating based on the total time

if (total\_time <= 1) {

strcpy(rating, "Outstanding");

} else if (total\_time <= 2) {

strcpy(rating, "Good");

} else if (total\_time <= 4) {

strcpy(rating, "Spending too much time; it could affect your health");

} else if (total\_time <= 5) {

strcpy(rating, "You're crossing your limits, it may become an addiction");

} else if (total\_time <= 6) {

strcpy(rating, "Bad");

} else {

strcpy(rating, "Severely unhealthy screen time");

}

// Output the result

printf("Person %d - Total Time Spent: %.2f hours, Average Time Spent: %.2f hours, Rating: %s\n", i, total\_time, avg\_time, rating);

}

return 0;

}

Link for GitHub-

# 