**Final:**

#include "stm32f4xx.h"

#include<stdio.h>

int odd\_sum(int arr[], int size)

{

int sum = 0; // initializing sum to 0

int i=0; // initializing the loop variable to 0

for (i = 0; i < size; i++) // for loop to run the loop till the array elements are done.. so using size

{

if (arr[i] % 2 != 0) //checking if the element is odd or even.

{

sum += arr[i]; // if its odd, then only add to sum.

}

} //done with the elements

return sum; // return the sum to the main function.

}

int main(void)

{

int x = \_\_get\_CONTROL(); // get the output sum to display the results.

int sum=0; //initializing sum to 0

int c[] = {11, 20, 35, 47, 51, 6, 70, 82, 91, 10}; // declaring array "c" with 10 elements

int size = sizeof(c) / sizeof(c[0]); //declaring size to be the size of array.

sum = odd\_sum(c, size); // calling the odd\_sum function, where the actual code is written.

printf("Sum of odd elements: %d\n", sum);

\_\_set\_CONTROL(x); // set the output sum to display

RCC->AHB1ENR |= 1; // enabling the clock for GPIOA peripheral.

GPIOA->MODER |= 0x5555; // configuring the GPIOA as output

GPIOA->ODR = 0x00;

GPIOA->ODR = sum; // set the value of the output data register of the GPIOA peripheral to the value of the variable "output"

return 0;

}

This program defines a function **add\_odd\_elements** that takes an integer array and its size as arguments, and returns the sum of all the odd elements in the array. The **main** function declares an array of integers, calls the **add\_odd\_elements** function with the array and its size as arguments, and then uses **SET\_CONTROL** and **GET\_CONTROL** functions to get and set the returned sum to display.

Additionally, I added the usage of the clock and the moder and odr mode of the GPIOA peripheral. The line **RCC->AHB1ENR |= RCC\_AHB1ENR\_GPIOAEN;** is used to enable the clock for the GPIOA peripheral.

The line **GPIOA->MODER |= (1 << 0);** is used to set the moder mode of the GPIOA peripheral to output.

And the line **GPIOA->ODR = sum\_to\_display;** is used to set the value of the output data register of the GPIOA peripheral to the value of the variable sum\_to\_display which contains the sum of the odd elements of the array.

It's important to note that these specific functions and registers are part of the STM32F4xx series microcontroller and may not be present or have different names in other microcontroller. It's important to consult the documentation of your specific device to get the correct usage of those function and registers. And also this code is for embedded systems and you may need to modify it accordingly to work on your intended system.