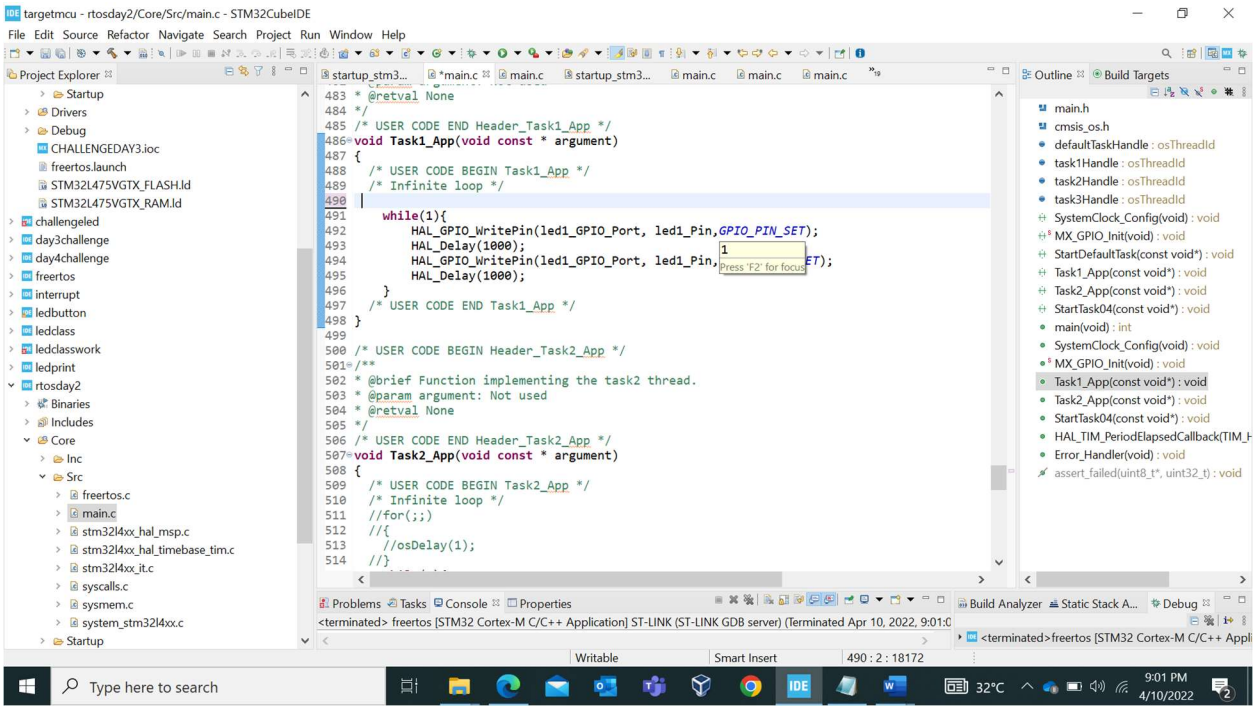
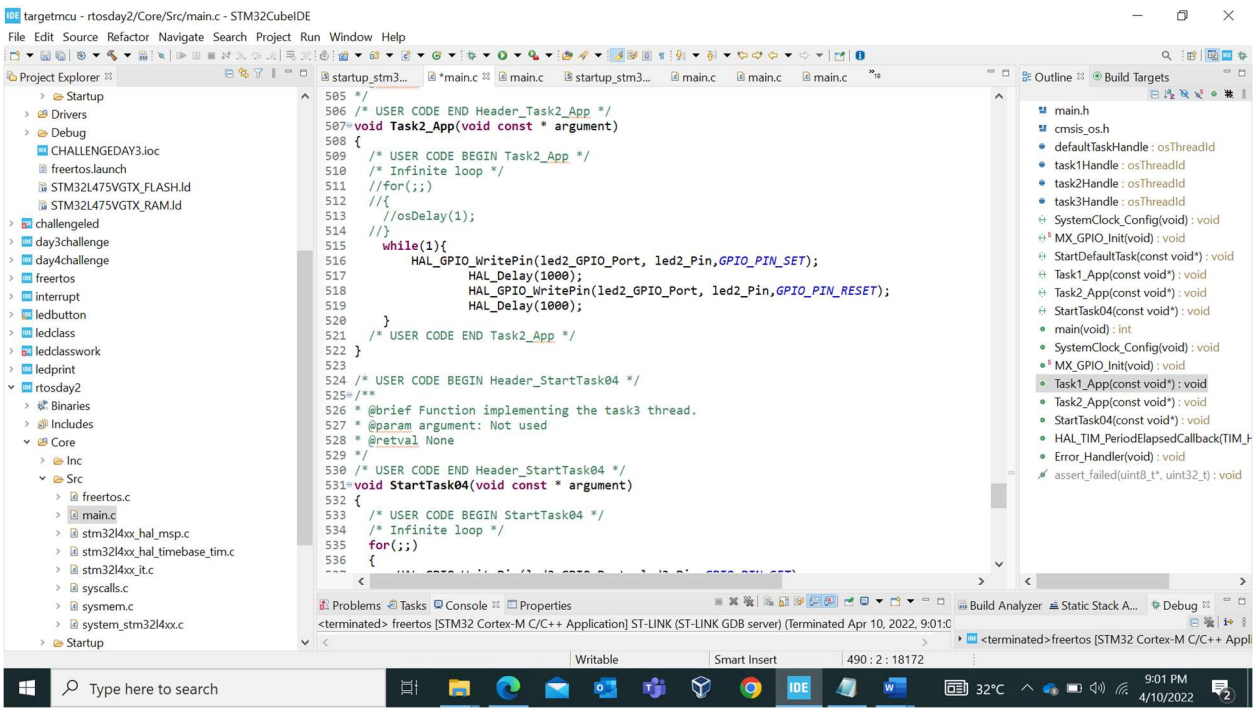
ASSIGNMENT -4

Name: Sharwari Daware

Shift2 Track2

Code for rtos tasks:



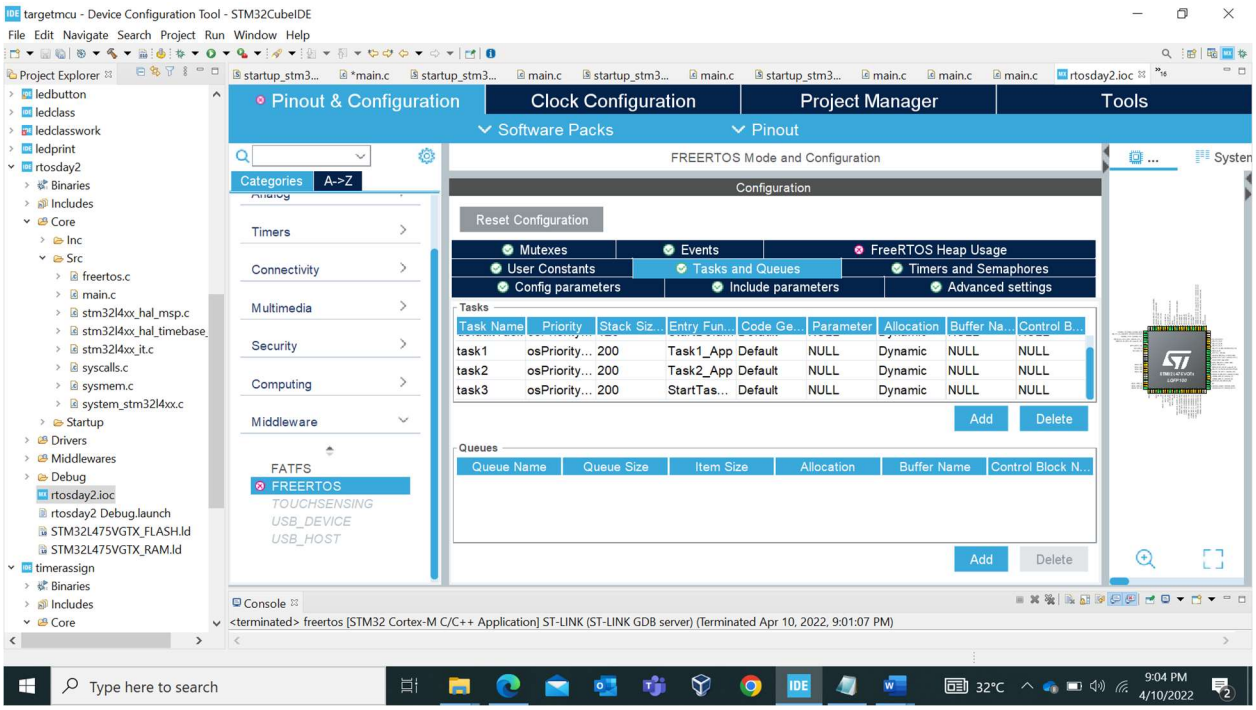


Code for timer interrupt:

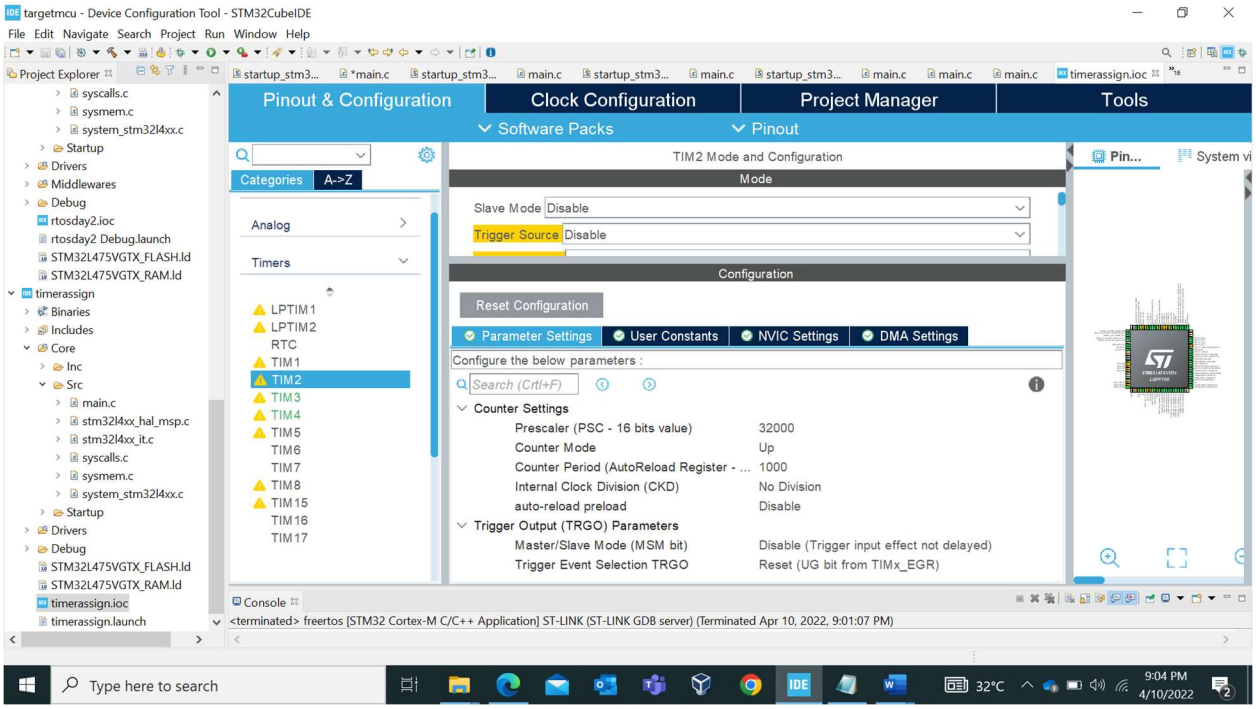
```
void HAL_TIM_PeriodElapsedCallback(TIM_HandleTypeDef *htim)
{
	if(htim->Instance==TIM2){
		HAL_GPIO_WritePin(led1_GPIO_Port, led1_Pin,GPIO_PIN_SET);
				HAL_Delay(1000);
				HAL_GPIO_WritePin(led1_GPIO_Port,
led1_Pin,GPIO_PIN_RESET);
				HAL_Delay(1000);

	}

	if(htim->Instance==TIM3){
		HAL_GPIO_WritePin(led2_GPIO_Port, led2_Pin,GPIO_PIN_SET);
				HAL_Delay(1000);
				HAL_GPIO_WritePin(led2_GPIO_Port,
led2_Pin,GPIO_PIN_RESET);
				HAL_Delay(1000);

	}

	if(htim->Instance==TIM4){
		HAL_GPIO_WritePin(led3_GPIO_Port, led3_Pin,GPIO_PIN_SET);
				HAL_Delay(1000);
				HAL_GPIO_WritePin(led3_GPIO_Port,
led3_Pin,GPIO_PIN_RESET);
				HAL_Delay(1000);

	}
```

```
        else{

                __NOP();
        }
}
```

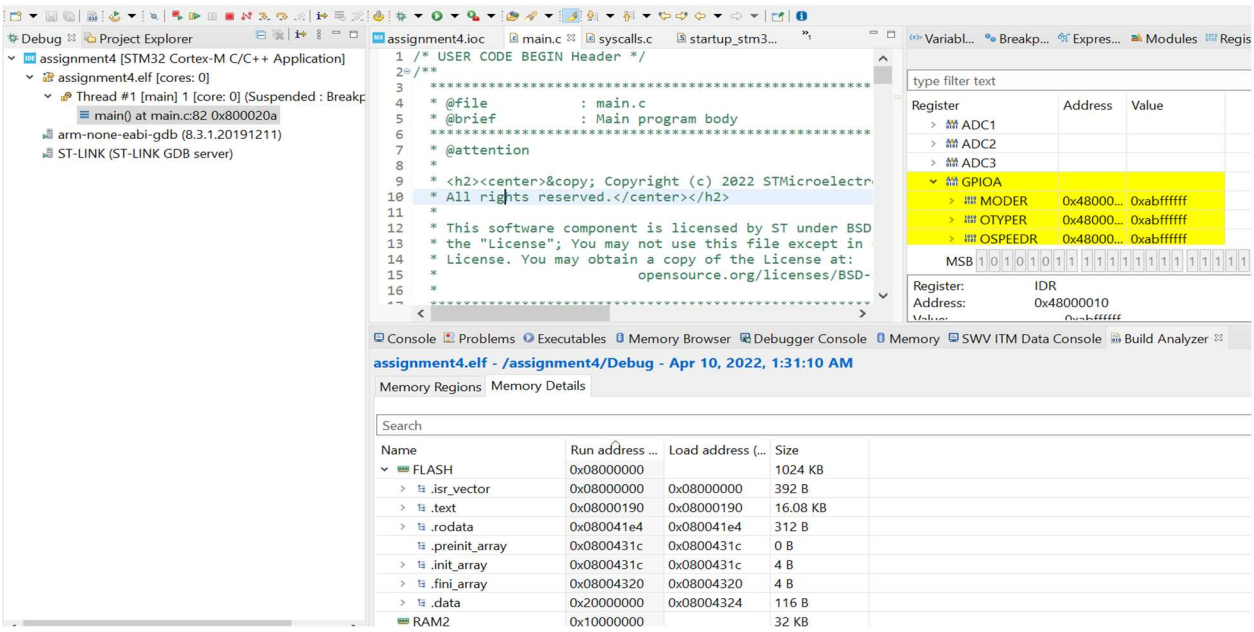
Configuration for RTOS:



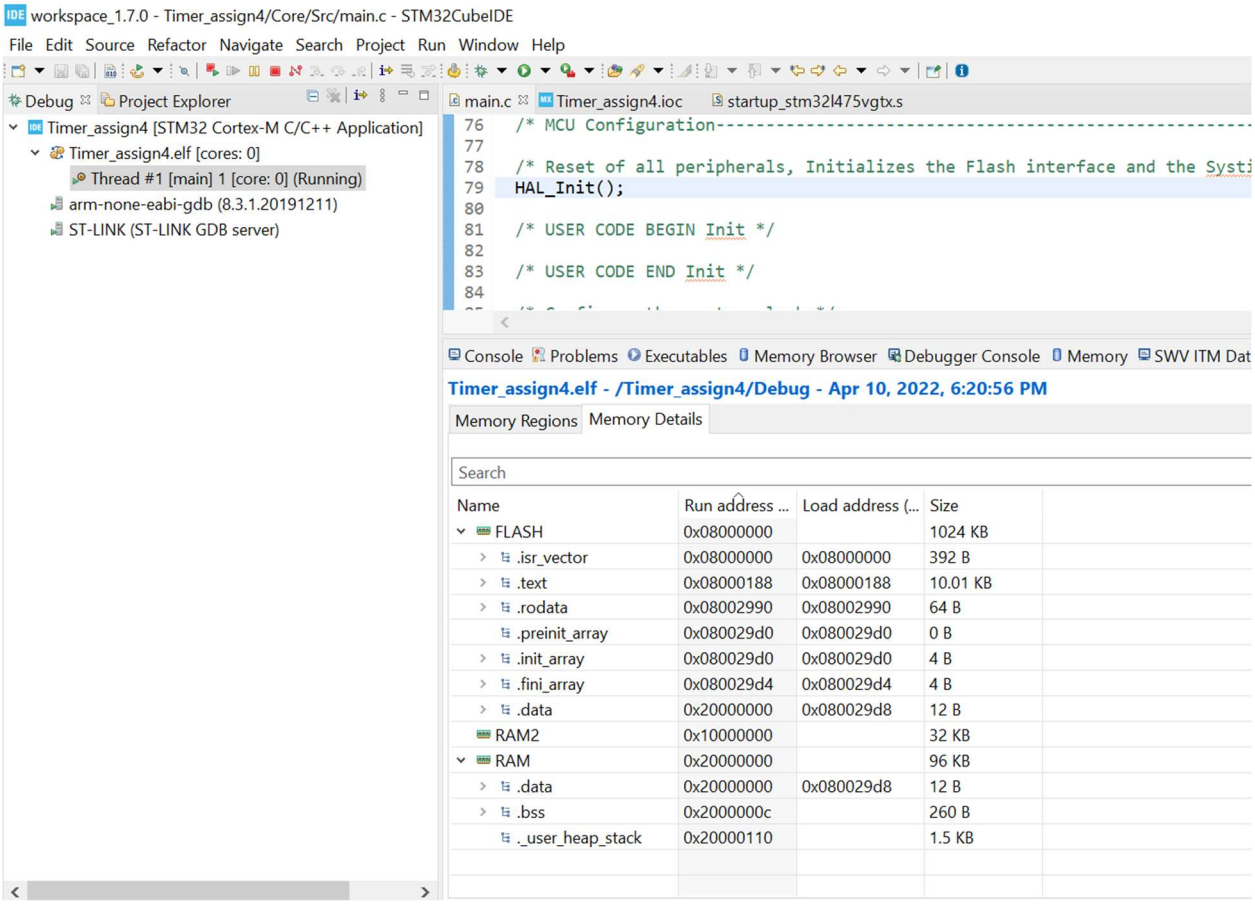
Configuration for timers:



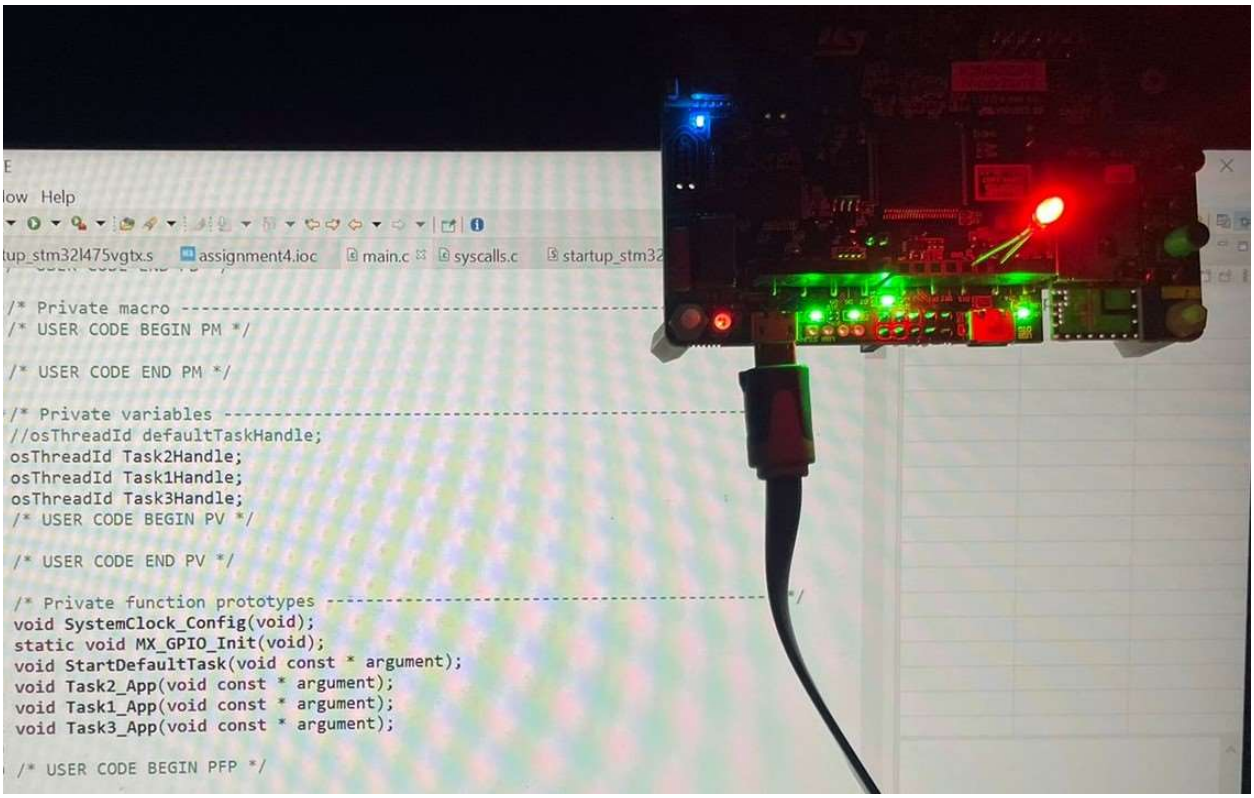
Memory related information for rtos tasks:



Memory related information for timer interrupt:


workspace_1.7.0 - Timer_assign4/Core/Src/main.c - STM32CubeIDE
File Edit Source Refactor Navigate Search Project Run Window Help
Debug
Project Explorer
Timer_assign4 [STM32 Cortex-M C/C++ Application]
Timer_assign4.elf [cores: 0]
Thread #1 [main] 1 [core: 0] (Running)
arm-none-eabi-gdb (8.3.1.20191211)
ST-LINK (ST-LINK GDB server)
main.c
Timer_assign4.ioc
startup_stm32l475vgtx.s
76 /* MCU Configuration--
77
78 /* Reset of all peripherals, Initializes the Flash interface and the Systi
79 HAL_Init();
80
81 /* USER CODE BEGIN Init */
82
83 /* USER CODE END Init */
84
Console
Problems
Executables
Memory Browser
Debugger Console
Memory
SWV ITM Dat
Timer_assign4.elf - /Timer_assign4/Debug - Apr 10, 2022, 6:20:56 PM
Memory Regions
Memory Details
Search
Name
Run address ...
Load address (...
Size
FLASH 0x08000000 1024 KB
.isr_vector 0x08000000 0x08000000 392 B
.text 0x08000188 0x08000188 10.01 KB
.rodata 0x08002990 0x08002990 64 B
.preinit_array 0x080029d0 0x080029d0 0 B
.init_array 0x080029d0 0x080029d0 4 B
.fini_array 0x080029d4 0x080029d4 4 B
.data 0x20000000 0x080029d8 12 B
RAM2 0x10000000 32 KB
RAM 0x20000000 96 KB
.data 0x20000000 0x080029d8 12 B
.bss 0x2000000c 260 B
._user_heap_stack 0x20000110 1.5 KB

OUTPUT:



Output

https://drive.google.com/file/d/1mrR_Ec9A8F2b91qZhReLAtWi06HWeBTk/view?usp=sharing