ASSIGNMENT 4

Create 3 tasks for LED blinking and prepare a report with comparison of 3 timer interrupt-based LED blinking. Analysis report should have:

1. Screenshot for both implementations
2. Time taken for execution in both implementations
3. Memory related information in both cases

Code:

// code for the program

void HAL\_TIM\_PeriodElapsedCallback(TIM\_HandleTypeDef \*htim){ if(htim->Instance==TIM2)

{

// To toggle the led.

HAL\_GPIO\_TogglePin(myled\_GPIO\_Port,myled\_Pin);

}

if(htim->Instance==TIM3)

{

//Timer instance TIM3

HAL\_GPIO\_TogglePin(myled1\_GPIO\_Port,myled1\_Pin);

}

if(htim->Instance==TIM5)

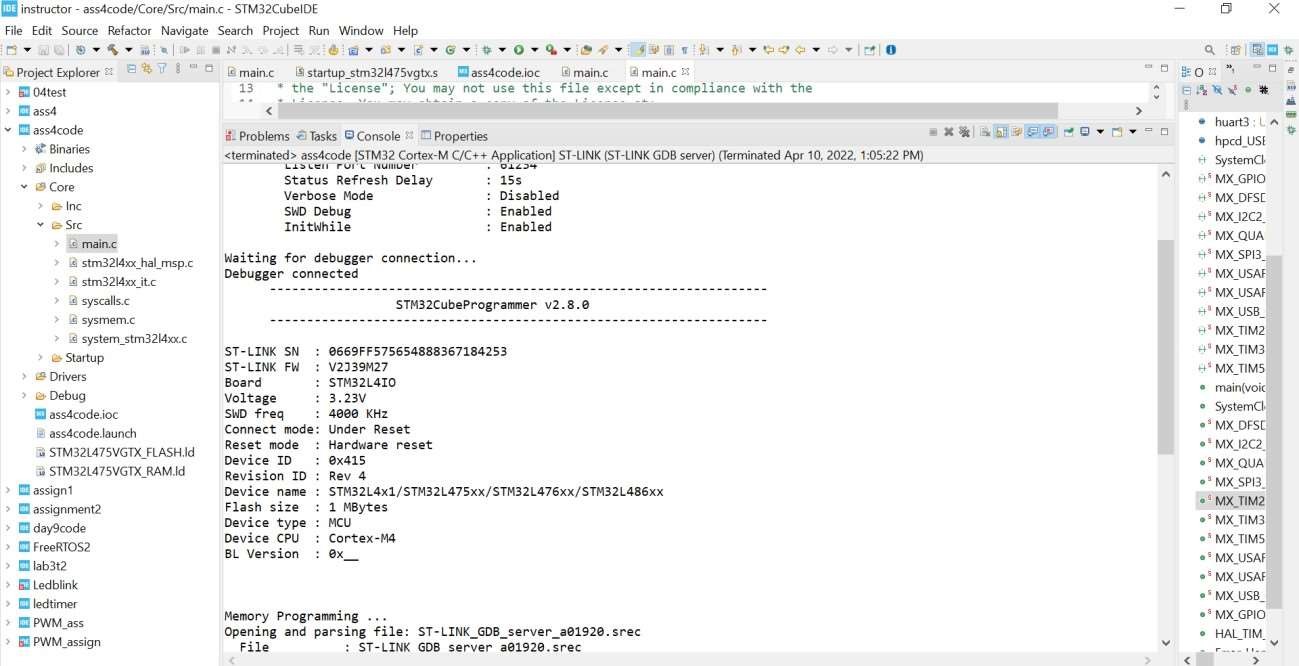
{

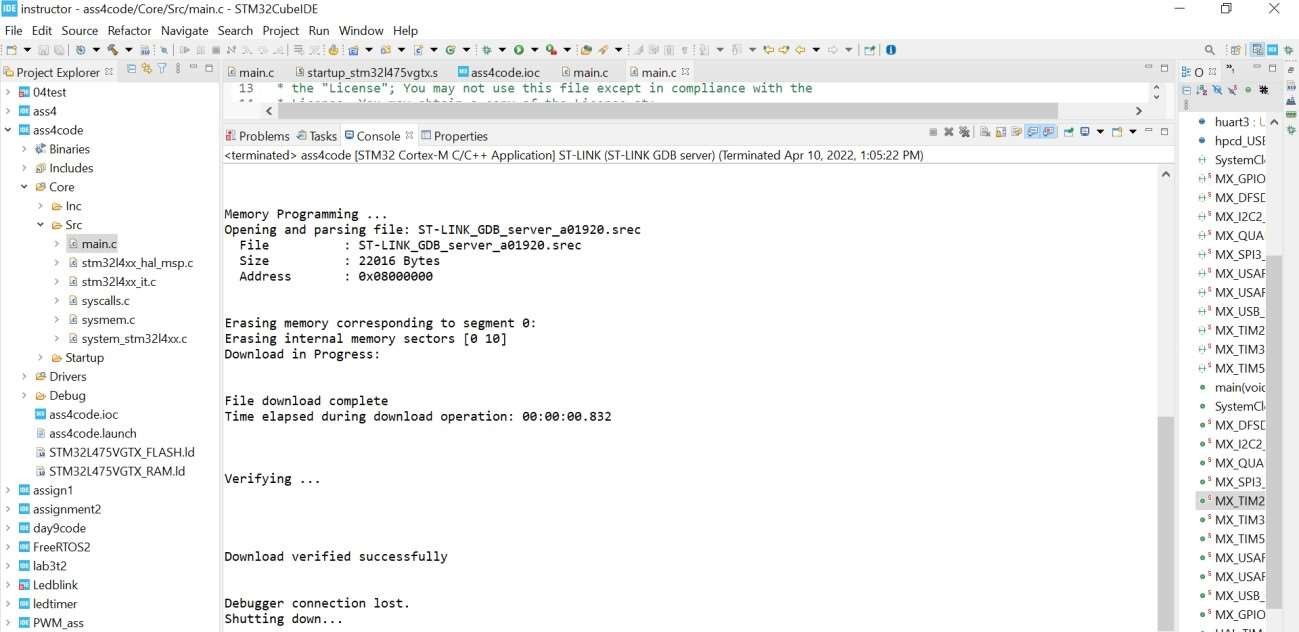
//Timer instance TIM3

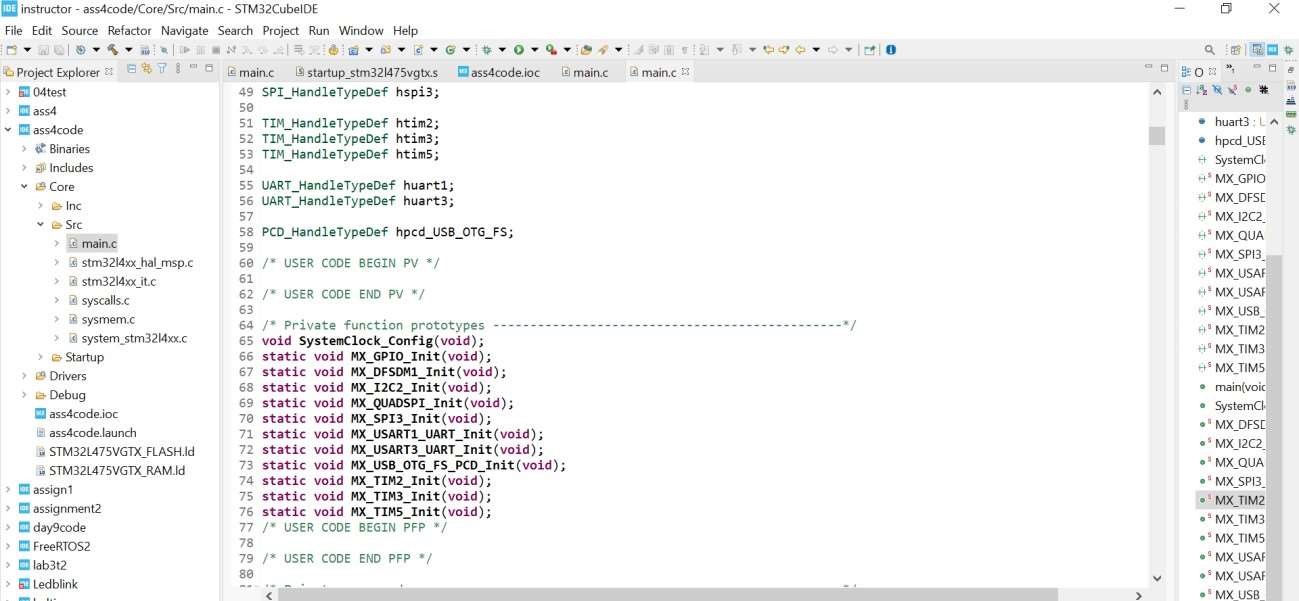
HAL\_GPIO\_TogglePin(myled2\_GPIO\_Port,myled2\_Pin);

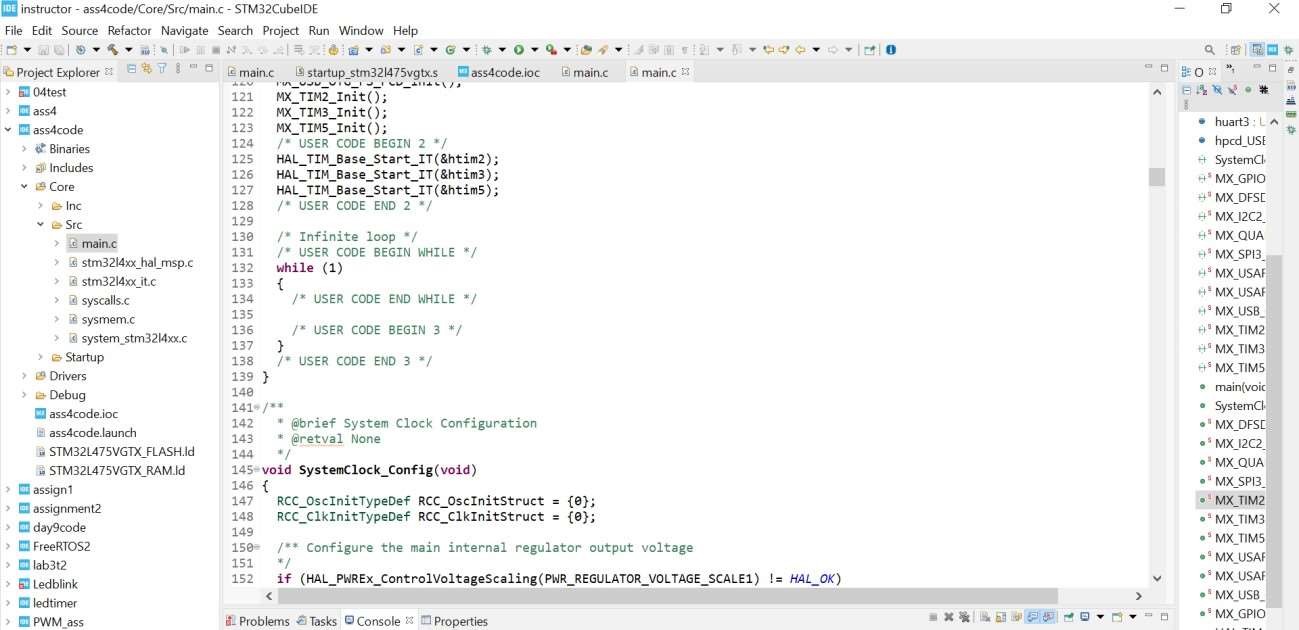
}

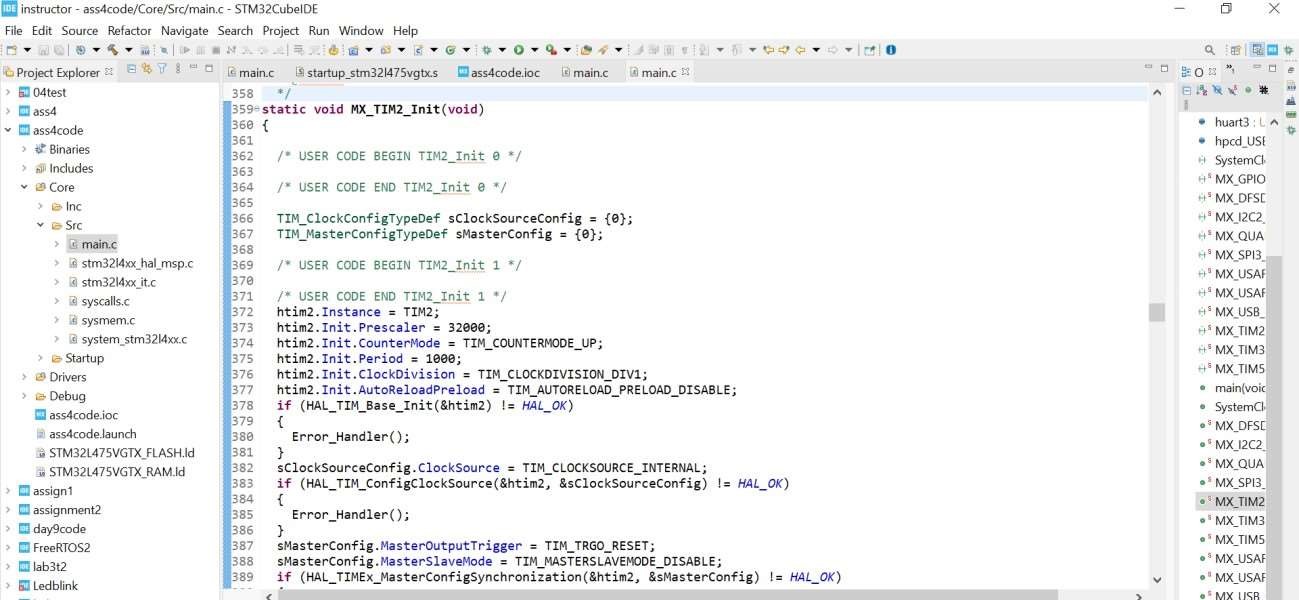
}

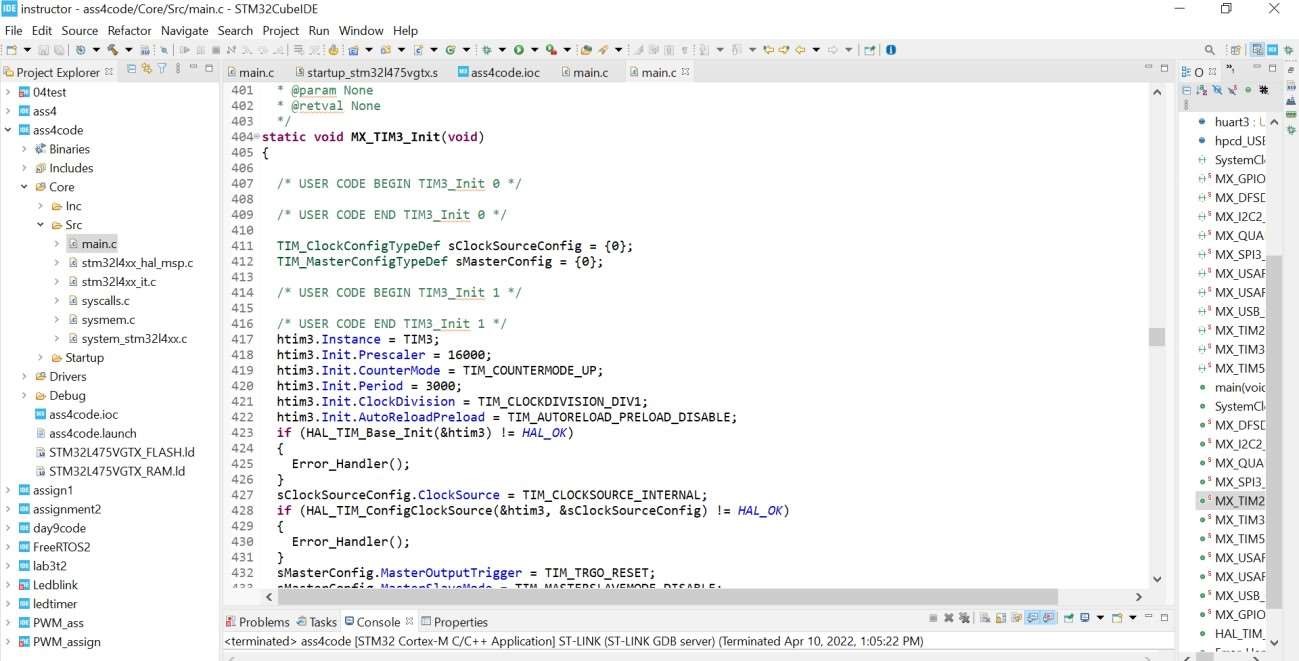


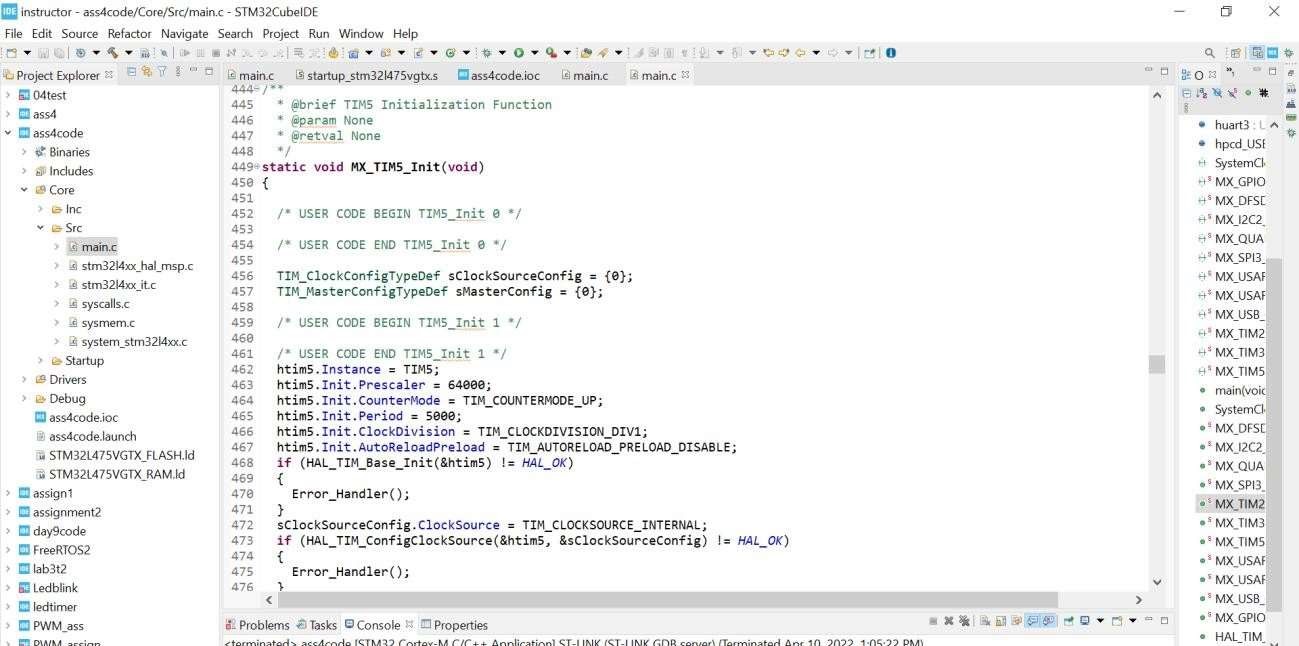


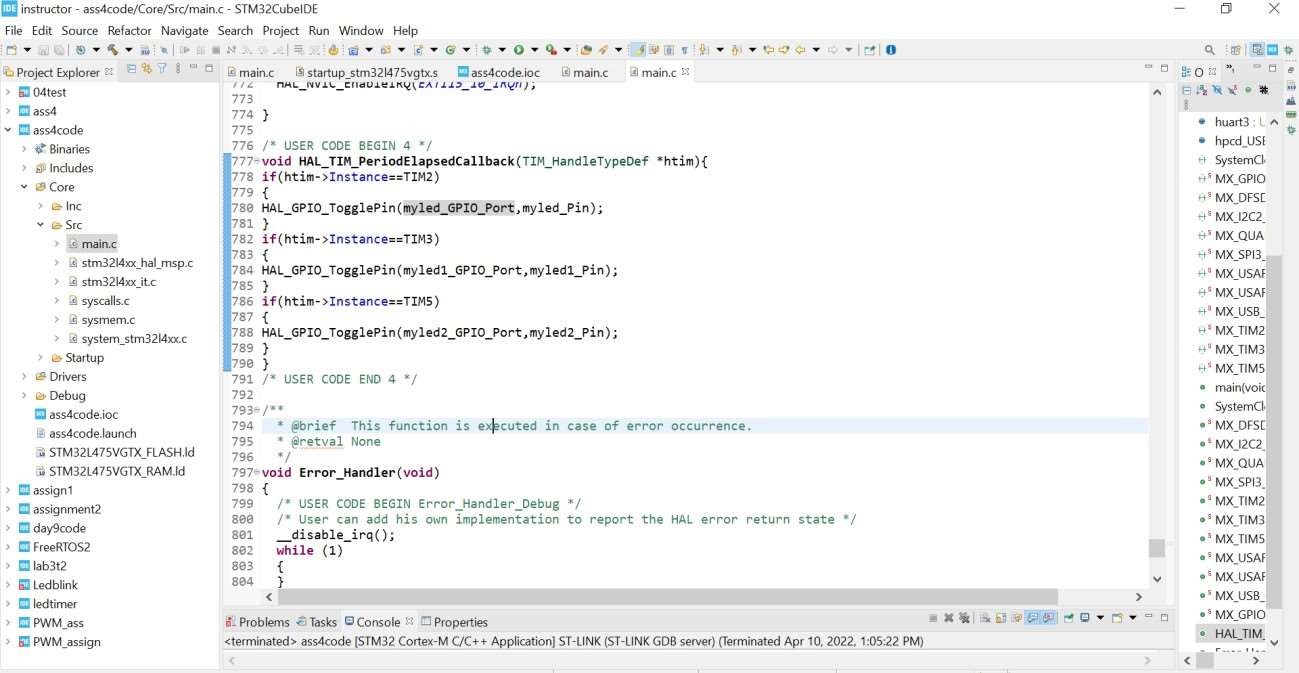












Code with RTOS:

// main loop started.

//Created task 1

static void task1\_handler(void\* parameters)

{

// Toggling LED1 and LED2 in a loop.

while(1)

{

printf("%s\n", (char\*)parameters); HAL\_GPIO\_TogglePin(myled\_GPIO\_Port,myled\_Pin); HAL\_GPIO\_TogglePin(myled2\_GPIO\_Port,myled2\_Pin);

taskYIELD();

}

}

static void task2\_handler(void\* parameters) // Created Task 2

{

// Toggling LED1 and LED2 for task 2.

while(1)

{

printf("%s\n", (char\*)parameters); HAL\_GPIO\_TogglePin(myled1\_GPIO\_Port,myled1\_Pin); HAL\_GPIO\_TogglePin(myled\_GPIO\_Port,myled\_Pin);

taskYIELD();

}

}

static void task3\_handler(void\* parameters)

{

// Toggling LED1 and LED2 for task 3.

while(1)

{

printf("%s\n", (char\*)parameters); HAL\_GPIO\_TogglePin(myled2\_GPIO\_Port,myled2\_Pin);

HAL\_GPIO\_TogglePin(myled1\_GPIO\_Port,myled1\_Pin);

taskYIELD();

}

}

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* ‘ task2 handle

Opening and parsing file: ST-LINt\_GDB\_server\_a1#688.srec

File : ST- LINK\_GDB\_server\_a14688 . srec • ‘ tasM kandle

Size : 26576 Bytes • Error Handle



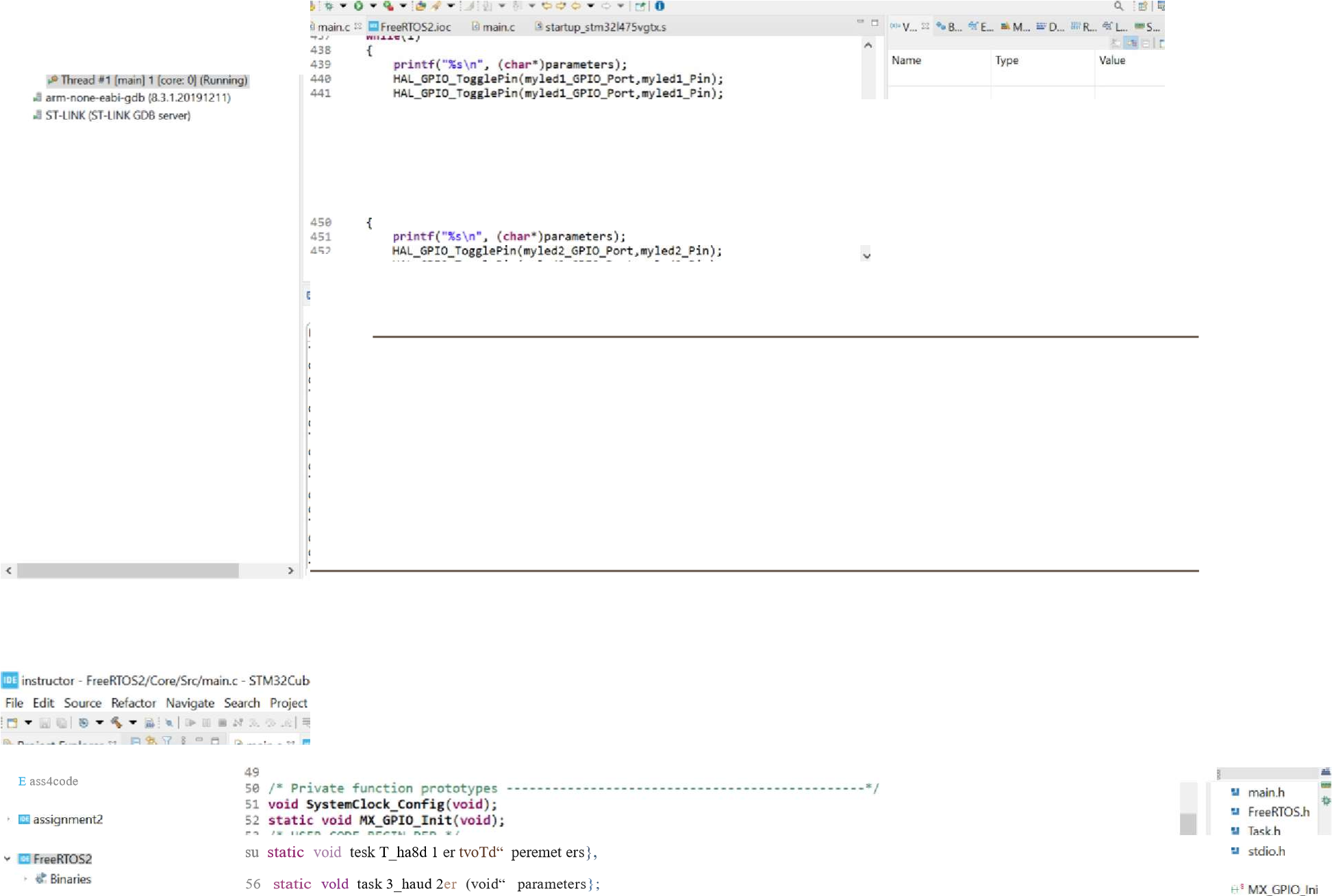
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