**Khushbu Patel 150034**

**Assignment 2**

**#include** "main.h"

**#include** "stdio.h"

int8\_t count=-1;

int main(void)

{

HAL\_Init();

SystemClock\_Config();

MX\_GPIO\_Init();

MX\_DFSDM1\_Init();

MX\_I2C2\_Init();

MX\_QUADSPI\_Init();

MX\_SPI3\_Init();

MX\_USART1\_UART\_Init();

MX\_USART3\_UART\_Init();

MX\_USB\_OTG\_FS\_PCD\_Init();

/\* USER CODE BEGIN 2 \*/

HAL\_GPIO\_EXTI\_Callback(GPIO\_PIN\_13); //ISR FUNCTION OF EXTERNAL INT.

/\* USER CODE END 2 \*/

while (1)

{

if(count==1)

{ HAL\_GPIO\_WritePin(GPIOA,GPIO\_PIN\_15,0);

HAL\_GPIO\_TogglePin(GPIOB,GPIO\_PIN\_14);

HAL\_Delay(1000);

}

else if(count==2)

{ HAL\_GPIO\_WritePin(GPIOB,GPIO\_PIN\_14,0);

HAL\_GPIO\_TogglePin(GPIOA,GPIO\_PIN\_15);

HAL\_Delay(1000);

}

else if(count==3)

{

HAL\_GPIO\_WritePin(GPIOB,GPIO\_PIN\_14,1);

HAL\_GPIO\_WritePin(GPIOA,GPIO\_PIN\_15,1);

}

else if(count==4)

{

HAL\_GPIO\_WritePin(GPIOB,GPIO\_PIN\_14,0);

HAL\_GPIO\_WritePin(GPIOA,GPIO\_PIN\_15,0);

}

else if(count==5)

{

count=1;

}

}

}

//WHEN USER BUTTON IS PRESSED ISR OF EXTI IS CALLED

/\* USER CODE BEGIN 4 \*/

**void** **HAL\_GPIO\_EXTI\_Callback**(uint16\_t GPIO\_Pin)

{

**if**(GPIO\_Pin == GPIO\_PIN\_13)

{

count++;

}

**else** {

\_\_NOP();

}

}

/\* US