# Mutex Analysis Assignment

## Enable ALL GPIO LED’s and GPIO Button

## Enable UART4(9600@8N1) for your Communication that will be shared across various tasks(All prints should be implemented by UART).

1. Task Priorities T1=Idle +1, T2=Idle, T3=Idle

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| Part 1 |
| Print “ Hello from Task1\r\n” from Task 1 , which has a vtaskDelay 1000ms |
| Verify your output and note your observations |
| Part 2 |
| Implement Print “ Hello from Task2\r\n” from Task 2 , when user presses the USER Button(Polling Approach) , vtaskDelay 500ms |
| Verify your output and note your observations |
| Part 3 |
| Make the vtaskDelay 1000ms Same for both the task |
| Verify your output and note your observations, was there any RACE Condition? |
| Part 4 |
| Now Protect your Critical Resource from Mutex in both the Task |
| Verify your output and note your observations, was there any RACE Condition? |
| Part 5 |
| Now Create a Task 3, and Implement Print “ Hello from Task3\r\n” from Task 3, which has vtaskDelay 1500ms, this should be protected from the same Mutex that was created Earlier. |
| Verify your output and note your observations, was there any RACE Condition? |
| Part 6 |
| Will Further Implement Direct Task Notification to Signal Task3 from Task2 so that print sequence will be as below when user presses USER Button:  Hello from Task2  Hello from Task3 |