



DEPARTMENT OF COMPUTER & SOFTWARE
ENGINEERING
COLLEGE OF E&ME, NUST, RAWALPINDI



Microprocessor and Microcontroller-Based Design
Lab#11

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Submission Date: 19-12-2022

Task 1 Code:

```
#include <P18f452.inc>
```

```
ORG 00H
```

```
COUNT_1 EQU 0x25
```

```
COUNT_2 EQU 0x28
```

```
COUNT_3 EQU 0x30
```

```
CLRF TRISD
```

```
MOVLW d'10'
```

```
MOVWF COUNT_1
```

```
AGAIN1
```

```
MOVLW d'10'
```

```
MOVWF COUNT_2
```

```
AGAIN2
```

```
MOVLW d'100'
```

```
MOVWF COUNT_3
```

```
AGAIN3
```

```
BTG PORTD, 1
```

```
DECFSZ COUNT_3, F
```

```
GOTO AGAIN3
```

```
DECFSZ COUNT_2, F
```

```
GOTO AGAIN2
```

```
DECFSZ COUNT_1,F  
GOTO AGAIN1
```

```
END
```

Task 2 Code:

```
#include <P18f452.inc>
```

```
ORG 00H
```

```
COUNT_1 EQU 0x25  
COUNT_2 EQU 0x28  
COUNT_3 EQU 0x30
```

```
CLRF TRISD  
MOVLW d'10'  
MOVWF COUNT_1
```

```
LOP1  
MOVLW d'10'  
MOVWF COUNT_2
```

```
LOP2  
MOVLW d'100'  
MOVWF COUNT_3
```

```
LOP3  
BTG PORTD, 1  
DECF COUNT_3, F
```

```
BNZ LOP3
```

```
DECF COUNT_2, F  
BNZ LOP2
```

DECF COUNT_1, F

BNZ LOP1

END

Proteus simulation and working for task 1 and task 2 are same:

