

**Assignment -1**  
Python Programming

Assignment Date	09 September 2022
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Maximum Marks	2 Marks

**Question-1:**

Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included). The numbers obtained should be printed in a comma-separated sequence on a single line.

**Solution:**

```
#include <SPI.h>
#include <Wire.h>
#include <IRremote.h>

const int relay_1 = 12;
const int relay_2 = 11;
const int relay_3 = 10;
const int relay_4 = 9;

const int mswitch_1 = 8;
const int mswitch_2 = 7;
const int mswitch_3 = 6;
const int mswitch_4 = 5;

int RECV_PIN = 3;

IRrecv irrecv(RECV_PIN);
decode_results results;

int toggleState_1 = 0;
int toggleState_2 = 0;
int toggleState_3 = 0;
int toggleState_4 = 0;

void setup()
{

    Serial.begin(9600);
```

```

irrecv.enableIRIn();

pinMode(relay_1, OUTPUT);
pinMode(relay_2, OUTPUT);
pinMode(relay_3, OUTPUT);
pinMode(relay_4, OUTPUT);

pinMode(mswitch_1, INPUT_PULLUP);
pinMode(mswitch_2, INPUT_PULLUP);
pinMode(mswitch_3, INPUT_PULLUP);
pinMode(mswitch_4, INPUT_PULLUP);
}

void relayOnOff(int relay)
{

    switch(relay)
    {
        case 1:
            if(toggleState_1 == 0){
                digitalWrite(relay_1, HIGH); // turn on relay 1
                toggleState_1 = 1;
            }
            else{
                digitalWrite(relay_1, LOW); // turn off relay 1
                toggleState_1 = 0;
            }
            delay(100);
            break;
        case 2:
            if(toggleState_2 == 0){
                digitalWrite(relay_2, HIGH); // turn on relay 2
                toggleState_2 = 1;
            }
            else{
                digitalWrite(relay_2, LOW); // turn off relay 2
                toggleState_2 = 0;
            }
            delay(100);
            break;
        case 3:
            if(toggleState_3 == 0){
                digitalWrite(relay_3, HIGH); // turn on relay 3
                toggleState_3 = 1;
            }
            else{
                digitalWrite(relay_3, LOW); // turn off relay 3
            }
    }
}

```

```

        toggleState_3 = 0;
    }
    delay(100);
    break;
    case 4:
        if(toggleState_4 == 0){
            digitalWrite(relay_4, HIGH); // turn on relay 4
            toggleState_4 = 1;
        }
        else{
            digitalWrite(relay_4, LOW); // turn off relay 4
            toggleState_4 = 0;
        }
        delay(100);
        break;

    default : break;
}
}

```

```

void loop() {

    if (digitalRead(mswitch_1) == LOW){
        delay(200);
        relayOnOff(1);
    }
    else if (digitalRead(mswitch_2) == LOW){
        delay(200);
        relayOnOff(2);
    }
    else if (digitalRead(mswitch_3) == LOW){
        delay(200);
        relayOnOff(3);
    }
    else if (digitalRead(mswitch_4) == LOW){
        delay(200);
        relayOnOff(4);
    }

    if (irrecv.decode(&results)) {
        switch(results.value){
            case 0xFD08F7:
                relayOnOff(1);
                break;

```

```

case 0xFD8877:
    relayOnOff(2);
    break;
case 0xFD48B7:
    relayOnOff(3);
    break;
case 0xFD28D7:
    relayOnOff(4);
    break;
default : break;
}
irrecv.resume();
}
}

```

