BITS PILANI, DUBAI CAMPUS
DUBAI INTERNATIONAL ACADEMIC CITY, DUBAI

FIRST SEMESTER 2023 – 2024
COURSE: CSF301 (Principles of Programming Languages)
COMPONENT: Tutorial Sheet 3   **DATE:** 30 September 2023

What will be the output of following C programs?

1. **Program 1**

```
#include <stdio.h>
int main()
{
int a = 4;
    int b = 1;

    if( a == 3 )
     {
      if( b == 1 ) // this is nested if
      {
       printf("a = 3 and b = 1 \n");
      }
     }
     else
     {
            if( b == 1 ) // this is nested if
             {
               printf("a != 3 and b = 1 \n");
          }
         }

}
```

Answer: a != 3 and b = 1

2. **Program 2**

```
#include "stdio.h"
int main()
{
   int a = 10;
   switch(a)
   {
     case 10: printf("Ten");
     case 20: printf("Twenty");
     case 30: printf("Thirty");
     default: printf("nothing");
   }
```

```
    return 0;
}
```

Answer: TenTwentyThirtynothing

3. Program 3
```
#include "stdio.h"
int main()
{
    int a=32;
    do
    {
            printf("%d ", a);
            a++;
            if(a > 35)
                    break;
    } while(1);

    return 0;
}
```

Answer: 32 33 34 35

4. Program 4

```
#include <stdio.h>
int main() {
     int digit = 0;
    for(; digit <= 9; )
            digit++;
    digit *= 2;
    --digit;
    return 0;
}
```

Answer: 19

5. Program 5

```
   #include <stdio.h>
   int main()
   {
     int i = 0;
     while (i < 2)
     {
        if (i == 1)
           break;
           i++;
```

```c
        if (i == 1)
            continue;
            printf("In while loop\n");
    }
    printf("After loop\n");
}
```

Answer: After loop