Digital assignment 2

Name: Y.Y.N.S.BHARGAV.

Reg.no: 22BRS1248

First question:

Paul is provided with a number "x" whose scope will remain throughout the program. Using the concept of recursion, help Paul to write a "C program" for finding the value of (x)n where n should be less than or equal to 5

Answer:

```c
#include <stdio.h>
int power(int x, int n);
int main() {
    int x, n, result;
    printf("Enter x and n (<= 5):\n");
    scanf("%d %d", &x, &n);
    result = power(x, n);
    printf("%d^%d = %d\n", x, n, result);
    return 0;
}
int power(int x, int n) {
    if (n == 0) {
        return 1;
    } else if (n == 1) {
        return x;
    } else if (n <= 5) {
        return x * power(x, n-1);
    } else {
```

```
        return -1;
    }
}
```