

LAB II

2. Find the errors (if any) in the following program assuming that the #define statements are correct. (You may type the program in a file **err.c** and identify the errors during compilation). Modify the code so that it becomes error free.

```
/* There are errors in /*the*/ code.*/
#include <stdio.h>
#define CUBE(X) (X)*(X)*(X)
#define SQ(X) (X)*(X);
int main()
{
    double Int,x,_x1,2xb,x-y,y3z;
    int Float,char,a,b,c,d,pa@b,qa.b;
    char int,u,_2v,w=t;
    a=2,b=3;
    a+b;
    c=a+b;
    a+b=1;
    b-a==c;
    d=w;
    a=CUBE(d);
    b=SQ(d)
    u=d+62;
    c=u-1;
    u='y';
    _2v=z;
    y3z=CUBE(c);
    x=SQ(c);
    _x1=SQ(c)*2;
    c=x+u;
    return 0;
}
```

1. /* There are errors in `/*the*/` code.*/ : nesting of comments is not allowed
2. double Int,x,_x1,`2xb`,`x-y`,y3z; : 2xb starts with a number and x-y contains a special character
3. int Float,`char`,a,b,c,d,`pa@b`,`qa.b`; : char is a keyword in C, both pa@b and qa.b contain special characters
4. char `int`,u,_2v,w=`t`; : int is a keyword in C and t is an unknown variable
5. `a+b=1`; : violates lvalue and rvalue rules
6. `_2v=z`; : z is an unknown variable
7. `_x1=SQ(c)*2`; : This is equivalent to `_x1=(c)*(c)*2`; which causes an error

An error free code for the same is as follows

```
/* There are errors in the code.*/
#include <stdio.h>
#define CUBE(X) (X)*(X)*(X)
#define SQ(X) (X)*(X);
int main()
{
    double Int,x,_x1,x2b,x_y,y3z;
    int Float,cHar,a,b,c,d,pa_b,qab;
    char inT,u,_2v,w='t';
    a=2,b=3;
    a+b;
    c=a+b;
    a+b==1;
    b-a==c;
    d=w;
    a=CUBE(d);
    b=SQ(d)
    u=d+62;
    c=u-1;
    u='y';
    _2v='z';
    y3z=CUBE(c);
    x=SQ(c);
    _x1=2*SQ(c);
    c=x+u;
    return 0;
}
```