Exercise 1

• Write a program that calculates the area and the perimeter of a circle with radius that is given by the user, print the results to the screen.
#include <stdio.h>
#define PI 3.14

int main()
{
    double radius, perimeter, area;
    printf("Enter the value of the radius\n");
    scanf("%lf", &radius);
    /*doing calculations*/
    perimeter = 2*PI*radius;
    area = PI*radius*radius;
    /*printing the result*/
    printf("The perimeter is: %f and the area is: %f",
    perimeter, area);
    return 0;
}
Exercise 2

• Write a program that get as input a lower case letter, and prints its appropriate upper case letter (assume that the input is correct).
• char c;
• scanf("%c", &c);
• c = (c-'a')+'A';
• printf("%c", c);
Exercise 3

• Write a program that get as input a lower case letter, and prints the next letter, in a cyclical order. Your solution should ignore characters which are spaces and new lines entered by the user, otherwise the input is legal.


```c
#define NUM_LETTERS ('z'-'a'+1)
/* (or just defined it to be 26) */
char c;
scanf(" %c", &c);
/* calculating the shift as 
   in the last exercise */
c = (c-'a');
c = (c+1)% NUM_LETTERS;
c += 'a';
printf("%c", c);
```
• Any problem with the last solution?
Alternative solution

- #define NUM_LETTERS ('z'-'a'+1)
- char c, shift, cyc_shift, next_char;
- printf("Enter character\n");
- scanf(" %c",&c);
- shift=c-'a';
- cyc_shift=(shift+1)% NUM_LETTERS;
- next_char='a'+cyc_shift;
- printf("The next character is %c\n", next_char);