

MODULE: 3.1 (C Language Fundamental)

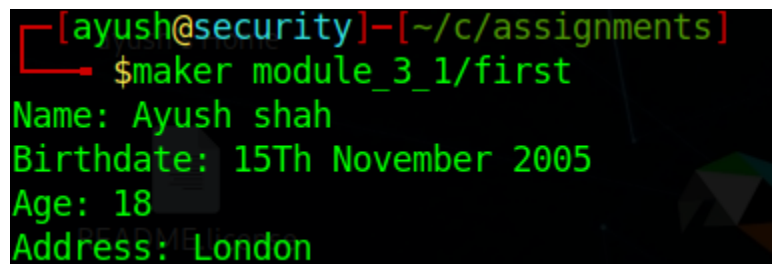
1. Display This Information using printf
 1. Your Name
 2. Your Birth date
 3. Your Age
 4. Your Address

Code:

```
#include <stdio.h>

int main(void){
    // printing on the screen
    printf("Name: Ayush shah\n");
    printf("Birthdate: 15Th November 2005\n");
    printf("Age: 18\n");
    printf("Address: London\n");

    return 0;
}
```



```
[ayush@security]--[~/c/assignments]
$maker module_3_1/first
Name: Ayush shah
Birthdate: 15Th November 2005
Age: 18
Address: London
```

2. Write a program to make Simple calculator (to make addition, subtraction, multiplication, division and modulo)

Code:

```
#include <stdio.h>

int main(void){
    // taking operator as character from the user and storing in op
```

```
char op;
// taking two numbers input and storing in the n1,n2
int n1,n2;

printf("Enter operator (+,-,/,*)");
scanf("%c",&op);

printf("Enter two numbers: ");
scanf("%d %d",&n1,&n2);

// To add
if(op == '+'){
    printf("Addition: %d\n",n1+n2);
}

// To subtract
else if (op == '-'){
    printf("Subtraction: %d\n",n1-n2);
}

// To multiply
else if(op == '*'){
    printf("Multiplication: %d\n",n1*n2);
}

// To divide

else if(op == '/'){
    printf("Division is %d\n",n1/n2);
}

// To modulo
else{
    printf("Modulo is: %d\n",n1%n2);
}

return 0;
}
```

```
[x]-[ayush@security]-[~/c/assignments]
$ make module_3_1/second
Enter operator (+,-,/,*)+
Enter two numbers: 1 2
Addition: 3
```

3. WAP to find area of circle, rectangle and triangle

Code:

```
#include <stdio.h>

// Building prototype of user defined functions

void triangle();
void rectangle();
void circle();

int main(void){
    // User choice stored in choice variable

    int choice;

    // Printing choice board
    printf("Choices: \n");
    printf("1. Area of Triangle\n");
    printf("2. Area of Rectangle\n");
    printf("3. Area of Circle\n\n\n");
    printf("Enter your choice: ");
    // Storing input into choice
    scanf("%d",&choice);

    // if choice is 1 then run triangle()

    if(choice == 1){
        triangle();
    }

    // If choice is 2 then run rectangle()
```

```

    else if (choice == 2){
        rectangle();
    }

    // If choice is 3 then run circle()

    else if(choice == 3){
        circle();
    }

    // Otherwise print invalid choice.

    else{
        printf("Invalid choice.");
    }

    return 0;
}

void triangle(){
    // asking height and breadth from the user

    int expression,h, b;
    printf("Enter height and breadth: ");
    scanf("%d %d",&h,&b);
    // Formula = (1/2) * height * base
    expression = 0.5 * h *b;
    // Print the result
    printf("The area of triangle is %d\n",expression);
}

void rectangle(){
    // Asking length and breadth from the user
    int expression,l, b;
    printf("Enter length and breadth of rectangle: ");
    scanf("%d %d",&l,&b);
    // Formula = length * breadth
    expression = l*b;

```

```

    // printing the result
    printf("The area of rectangle is %d\n",expression);
}

void circle(){
    // asking radius from the user
    int expression, r;
    printf("Enter radius of the circle: ");
    scanf("%d",&r);
    // Formula = PIE * r^2
    expression = 3.14 * r * r ;
    // Printing results
    printf("The area of circle is %d\n",expression);
}

```

```

[ayush@security]-[~/c/assignments]
$make module_3_1/third
Choices:
1. Area of Triangle
2. Area of Rectangle
3. Area of Circle

Enter your choice: 2
Enter length and breadth of rectangle: 10 20
The area of rectangle is 200

```

4. WAP to find simple interest

Code:

```

#include <stdio.h>

int main(void){
    // Asking for the principal amount, rate of interest and term from the
    user
    int principal;
    float rate,term,result;

```

```

printf("Enter principal, rate of interest, term in year: ");
scanf("%d %f %f",&principal,&rate,&term);

// Formula = PRN / 100
result = (principal * rate * term) / 100;
// print the interest
printf("Your Total interest is %.2f\n",result);
// print the interest + principal
printf("Your endbalance is %.2f\n",result+principal);

return 0;
}

```

```

[ayush@security] - [~/c/assignments]
$ make module_3_1/four
Enter principal, rate of interest, term in year: 100000 4 4
Your Total interest is 16000.00
Your endbalance is 116000.00

```

5. WAP to check if the given year is a leap year or not

Code:

```

#include <stdio.h>

int main() {
    int year;

    // Input year from the user
    printf("Enter a year: ");
    scanf("%d", &year);

    // Check if it's a leap year
    if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
        printf("%d is a leap year.\n", year);
    } else {

```

```
    printf("%d is not a leap year.\n", year);  
}  
  
return 0;  
}
```

```
[ayush@security]~[/c/assignments]  
└─$ make module_3_1/five  
Enter a year: 200  
200 is not a leap year.  
[ayush@security]~[/c/assignments]  
└─$ make module_3_1/five  
Enter a year: 2001  
2001 is not a leap year.  
[ayush@security]~[/c/assignments]  
└─$ make module_3_1/five  
Enter a year: 2000  
2000 is a leap year.
```