

POLYTECHNIC COLLEGE

DEPARTMENT OF COMPUTER ENGINEERING

SEM:III

“N” SCHEME

C-PROGRAMMING LAB MANUAL

PREPARED BY:

SRIPC STUDENTS OF DCSE



EX NO:1(a)
PRINT YOUR NAME AND ADDRESS

AIM

To write a C program to print your name and address.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, string.h

STEP 3:Call the main function

STEP 4:Get the name and address

STEP 5: Print the name and address

STEP 6: Stop the program

Program

#include<stdio.h>

#include<string.h>

#include<conio.h>

void main()

{

char n[15],add[50];

clrscr();

printf("Enter your Name and Address\n");

scanf("%s%s",&n,&add);

printf("Name:%s\n",n);

printf("Address:%s\n",add);

getch();

EX NO:1 (b) SIMPLE INTEREST AND COMPOUND INTEREST

AIM

To write a C program for simple and compound interest calculation.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, conio.h and math.h.

STEP 3:Call the main function

STEP 4:Declare the variables for principal amount, rate of interest, time period in year.

STEP 5:Get the values for p,n,r

STEP 6:Use the formula $p*n*r/100$ and calculate the simple interest value.

STEP 7:Use the formula $p*pow(1+r/100,n)-p$ and calculate the compound interest value.

STEP 8:Print all the value s.

STEP 9:Stop the program.

Program

```
#include<stdio.h>  
#include<conio.h>  
#include<math.h>  
void main()  
{  
float p,n,r,SI,CI;  
clrscr();  
printf("Enter Principle Amount:\n");  
scanf("%f",&p);  
printf("Enter Rate of Interest:\n");  
scanf("%f",&r);  
printf("Enter No: of years:\n");  
scanf("%f",&n);  
SI= (p*n*r)/100;  
CI= (p*pow((1+r/100),n)-p);  
printf("Simple_Interest is:%7.2f\n",SI);  
printf("Compound_Interest is:%7.2f",CI);  
getch();  
}
```

RESULT

Thus the program was executed successfully and output was verified

EX NO:2 (i) SWAP TWO VARIABLE'S USING THIRD VARIABLE

AIM

To Write a C program to swap two variable 's using i) third variable
ii) without using a third variable

AIM

To write a C Program to swap two variable's using a third variable

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h , conio.h

STEP 3:Call the main function

STEP 4:Declare the 3 variables a,b,c.

STEP 5:Get the values for a,b

STEP 6:Swap the values using third variable c=a, a=b, b=c

STEP 7:Print the values a and b.

STEP 8:Stop the program.

Program

#include<stdio.h>

#include<conio.h>

void main()

{

int a,b,c;

clrscr();

printf("Enter values for a and b\n");

scanf("%d%d",&a,&b);

c=a;

a=b;

b=c;

[19:51, 2/21/2023] Hariharan Saravanan 🍷: printf("Swapping a & b values
using third variable c is %d\t%d\n",a,b);

getch();

}

RESULT

Thus the programs were executed successfully and outputs were verified

2) ii) SWAP TWO VARIABLE'S WITHOUT USING THIRD VARIABLE

AIM

To write a C Program to swap two variable s without using third variable.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, conio.h

STEP 3:Call the main function

STEP 4:Declare the 3 variables a,b,c.

STEP 5:Get the values for a,b

STEP 6:Swap the values without using third variables $a=a+b$, $b=a-b$, $a=a-b$

STEP 7:Print the values a and b

STEP 8:Stop the program.

Program

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
int a,b,c;
```

```
clrscr();
```

```
printf("Enter values for a and b\n");
```

```
scanf("%d%d",&a,&b);
```

```
a=a+b;
```

```
b=a-b;
```

```
a=a-b;
```

```
printf("Swapping a & b values without using third variable c is %d\t%d\n",a,b);
```

```
getch();
```

```
}
```

RESULT

Thus the programs were executed successfully and outputs were verified.

EX NO:3. NUMBER OF DAYS INTO DAYS AND MONTHS

AIM

To write a C program to convert a given number of days into months and days using integer arithmetic operators.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, conio.h

STEP 3:Call the main function

STEP 4: Declare variables days, months

STEP 5: Calculate months=days/30 and days=days%30

STEP 6: Print the number of days and months

STEP 7:Stop the program.

Program

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
int days,months;
```

```
clrscr();
```

```
printf("Enter the number of days:\n");
```

```
scanf("%d",&days);
```

```
months=days/30;
```

```
days=days%30;
```

```
printf("%d months and %d days",months,days);
```

```
getch();
```

```
}
```

RESULT

Thus the program was executed successfully and output was verified.

EX NO:4. EVALUATION OF EXPRESSION

AIM

To write a program , use the variables in expression and their evaluation.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, conio.h

STEP 3: Call the main function
STEP 4: Declare the variables x,y,z,exp1,exp2
STEP 5: Get the input values x,y,z
STEP 6: Using $(x-y)/(y-z)+z*(y+z)$ calculate exp1
STEP 7: Using $\text{exp2}=\text{pow}(x,y)+2$ calculate exp2
STEP 8: Print values exp1,exp2
STEP 9: Stop the program

Program

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
    int x,y,z,exp1;
    float exp2;
    clrscr();
    printf("Get the values for x,y,z\n");
    scanf("%d%d%d",&x,&y,&z);
    exp1=(x-y)/(y-z)+z*(y+z);
    exp2=pow(x,y)+2;
    printf("Expression1 =(x-y)/(y-z)+z*(y+z)==%d\n",exp1);
    printf("Expression2 =pow(x,y)+2==%d",exp2);
    getch();
}
```

RESULT

Thus the program was executed successfully and output was verified.

EX NO: 5. TEMPERATURE IN FAHRENHEIT TO CELSIUS

AIM

To write a program which convert the given temperature in Fahrenheit to Celsius using preprocessor.

ALGORITHM

STEP 1:Start the program.

STEP 2:Declare the header files stdio.h, conio.h

STEP 3: Define the preprocessor as DIV

STEP 4:Call the main function

STEP 5: Declare the variables ft and Celsius

STEP 6: Get the value of temperature in Fahrenheit

STEP 7: Using formula, celsius = $(f-32)*5/9$ calculate the Celsius

STEP 8: Print the value of Celsius

STEP 9:Stop the program

Program

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#define DIV 1.8
```

```
void main()
```

```
{
```

```
float ft,celsius;
```

```
clrscr();
```

```
printf("Enter Temperature in Fahrenheit\n");
```

```
scanf("%f",&ft);
```

```
celsius=(ft-32)/DIV;
```

```
printf("Temperature in Celsius is %.3f",celsius);
```

```
getch();
```

```
}
```

RESULT

Thus the program was executed successfully and output was verified.