## EXPERIMENT NUMBER – 2nd

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CLASS AND GROUP – *CSE 34B*

SEMESTER – 1st

# AIM OF THE EXPERIMENT –

***P*ractical 2.1:** *Ram, Mohan and Sohan took loan of Rs. x, y and z on rate of interest r%, p%, q% for time t1, t2 and t3 years respectively. Calculate simple interest they will pay and find who will pay the most*

# ALGORITHM --

#include<stdio.h>

int main()

{

int r1,r2,r3,t1,t2,t3;

float p1,p2,p3,i1,i2,i3;

printf("Enter Interest Rate,Time(in mounths),Princial");

printf("\nfor first person r,t,p = ");

scanf("%d%d%f",&r1,&t1,&p1);

printf("\nfor second person r,t,p =");

scanf("%d%d%f",&r2,&t2,&p2);

printf("\nfor third person r,t,p =");

scanf("%d%d%f",&r3,&t3,&p3);

printf("for 1st rate r1=%d,\ntime t1=%d,\np1=%f",r1,t1,p1);

printf("for 2st rate r2=%d,\ntime t2=%d,\np2=%f",r2,t2,p2);

printf("for 3st rate r3=%d,\ntime t3=%d,\np3=%f",r3,t3,p3);

i1=p1\*r1\*t1/100;

i2=p2\*r2\*t2/100;

i3=p3\*r3\*t3/100;

printf("\nSintrest of first person=%f",i1);

printf("\nSintrest of second person=%f",i2);

printf("\nSintrest of third person=%f",i3);

if(i1>i2&i1>i3)

printf("\nintrest of 1st person is the greatest i1=%f",i1);

if(i2>i3&i2>i1)

printf("\nintrest of 2st person is the greatest i2=%f",i2);

if(i3>i2&i3>i1)

printf("\nintrest of 3st person is the greatest i3=%f",i3);

return 0;

}

## OUTPUT --

Enter Interest Rate,Time(in mounths),Princial

for first person r,t,p = 6

12

230000

for second person r,t,p =9

14

500000

for third person r,t,p =5

10

1200000 0

for 1st rate r1=6,

time t1=12,

p1=230000.000000for 2st rate r2=9,

time t2=14,

p2=500000.000000for 3st rate r3=5,

time t3=10,

p3=120000.000000

Sintrest of first person=165600.000000

Sintrest of second person=630000.000000

Sintrest of third person=60000.000000

intrest of 2st person is the greatest i2=630000.000000

# AIM OF THE EXPERIMENT –

**Practical 2.2:** Inside the CPU, mathematical operations like addition, subtraction, multiplication and division are done in bit-level. To perform bit-level operations in C programming, bitwise operators are used. Apply the knowledge you gained while learning bitwise operators.

Write a program to input two integers from user by using single scanf. Compute and display the value for a& b,

# a| b, a f b.

# ALGORITHM --

#include <stdio.h>

main()

{

int a,b;

printf("Enter the values of a and b =");

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

printf("a&b =%d",a&b);

printf("\na|b =%d",a|b);

printf("\na^b =%d",a^b);

return 0;

}

## OUTPUT --

Enter the values of a and b =12

19

a&b =0

a|b =31

a^b =31

# AIM OF THE EXPERIMENT –

**Practical 2.3:** Write a C program to find out year in which Mr. Kavi was born from the following information.

a)    Kavi is m years younger than his mother.

b)    Kavi’s brother who born in year y(1900<=y<=2019) is n years younger to his mother

c)     If Kavi’s brother is reading in class r then On the basis of your common sense also predict

      In which class Kavi is reading?

# ALGORITHM --

#include<stdio.h>

main()

{

int m,n,y,kc,c,a,b;

printf("enter age difference between Kavis mother and her brother =");

scanf("%d",&m);

printf("enter birth year of Kavis younger brother(1900 <--> 2019)=");

scanf("%d",&y);

printf("enter age difference between Kavis mpther and him =");

scanf("%d",&n);

//Assuming Kavis brother never failed

printf("enter class in which kavis brother is in =");

scanf("%d",&kc);

//a= age difference between kavis and his younger brother

a=m-n;

//c= Kavis class

c=kc+a;

//b= kavis birth year

b=y-a;

printf("kavi is in class c=%d\n",c);

printf("year in which kavi was born b=%d",b);

return 0;

}

## OUTPUT --

enter age difference between Kavis mother and her brother =15

enter birth year of Kavis younger brother(1900 <--> 2019)=1 2000

enter age difference between Kavis mpther and him =10

enter class in which kavis brother is in =8

kavi is in class c=13

year in which kavi was born b=1995

# AIM OF THE EXPERIMENT –

Practical 2.4: If last day of mth month of the year is Friday then find out nth day(1<=n<=31) of the same month .

# ALGORITHM --

#include<stdio.h>

main()

{

int num, month;

printf("Enter the day you want to find =");

scanf("%d", &num);

printf("Enter the month =");

scanf("%d",&month);

if(month==1||month==3||month==5||month==7||month==8||month==10||month==12)

{

if((31-num)%7==0)

printf("The day is friday");

if((31-num)%7==1)

printf("The day is Thursday");

if((31-num)%7==2)

printf("The day is Wednesday");

if((31-num)%7==3)

printf("The day is Tuesday");

if((31-num)%7==4)

printf("The day is Monday");

if((31-num)%7==5)

printf("The day is Sunday");

if((31-num)%7==6)

printf("The day is Saturday");

}

if(month==4||month==6||month==9||month==11)

{

if((30-num)%7==0)

printf("The day is friday");

if((30-num)%7==1)

printf("The day is Thursday");

if((30-num)%7==2)

printf("The day is Wednesday");

if((30-num)%7==3)

printf("The day is Tuesday");

if((30-num)%7==4)

printf("The day is Monday");

if((30-num)%7==5)

printf("The day is Sunday");

if((30-num)%7==6)

printf("The day is Saturday");

}

if(month==2)

{

if((28-num)%7==0)

printf("The day is friday");

if((28-num)%7==1)

printf("The day is Thursday");

if((28-num)%7==2)

printf("The day is Wednesday");

if((28-num)%7==3)

printf("The day is Tuesday");

if((28-num)%7==4)

printf("The day is Monday");

if((28-num)%7==5)

printf("The day is Sunday");

if((28-num)%7==6)

printf("The day is Saturday");

}

return 0;

}

## OUTPUT --

Enter the day you want to find =11

Enter the month =11

The day is Sunday

# AIM OF THE EXPERIMENT –

Practical 2.5: In a class of N students are there , girls and boys are in ratio is p:q , Savita ranked rth from the top. If there are m (m<r) boys ahead of Savita, how many girls are after her rank ?Also find whether she is among top 10 students of the class or not ?

# ALGORITHM --

#include <stdio.h>

int main()

{

printf("Taking class size as 80 and ratio of girls and boys in the class as 2:3\n");

int x, m, r;

printf("Enter rank of Savita:\n");

scanf("%d",&r);

again:

printf("Enter value of no. of boys ahead Savita: \n");

scanf("%d",&m);

if(m<r)

{

x = m-r + 32; //no. of girls behind savita x = m-r+ (2\*80/2+5)

printf("the number of girls behind Savita are: %d\n",x);

}

else

{

printf("There can be %d students in total and no. of boys could only be: %d",r,m-r);

goto again;

}

return 0;

}

## OUTPUT --

Taking class size as 80 and ratio of girls and boys in the class as 2:3

Enter rank of Savita:

9

Enter value of no. of boys ahead Savita:

5

the number of girls behind Savita are: 28

LEARNING OUTCOMES

|  |
| --- |
| * Identify situations where computational methods would be useful. |
| * Approach the programming tasks using techniques learnt and write pseudo-code. |
| * Choose the right data representation formats based on the requirements of the problem. |
| * Use the comparisons and limitations of the various programming constructs and choose the right one for the task. |

EVALUATION COLUMN (To be filled by concerned faculty only)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **Parameters** | **Maximum**  **Marks** | **Marks**  **Obtained** |
| 1. | Student’s performance while executing the  program in Computer Lab | 12 |  |
| 2. | Completion of worksheet with learning outcomes and program’s output along with cleanliness and discipline. | 10 |  |
| 3. | Clarification of theoretical concepts | 8 |  |
| 4. | Total Marks | 30 |  |
| 5. | Teacher’s Signature (with date) |  | |