## EXPERIMENT NUMBER - ***2.4***

STUDENT’S NAME – *YASH GUPTA*

STUDENT’S UID – *20BCS5009*

CLASS AND GROUP – *CSE 34-B*

SEMESTER – *1*

## AIM :–

*A function is provided with zero or more arguments, and it executes the statements on it. Based on the return type, it either returns nothing (void) or something. Develop a program to find greatest of four numbers using function int max\_of\_four(int a, int b, int c, int d) which reads four arguments and returns the greatest of them.*

## PROGRAM CODE :-

#include<stdio.h>

int main()

{

int a,b,c,d;

printf("Enter 4 numbers :\n");

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

printf("Largest number is : %d", max\_of\_four(a,b,c,d));

return 0;

}

int max\_of\_four(int a, int b, int c, int d)

{

if (a>b && a>c && a>d)

return a;

else if (b>c && b>d)

return b;

else if (c>d)

return c;

else

return d;

}

## OUTPUT :-

Enter 4 numbers :

4

8

6

12

Largest number is : 12

## AIM :–

Write a recursive function for computing factorial of a number. Write main to test its functioning.

## PROGRAM CODE :-

#include <stdio.h>

int main()

{

int n;

printf("Enter number to find factorial of it : "); scanf("%d", &n);

if (n >= 0)

printf("Factorial of given no %d is : %d", n, factorial(n));

else

printf("Not Possible");

return 0;

}

int factorial(int n)

{

if(n==0) return 1;

else

return n\*factorial(n-1);

}

## OUTPUT :-

Enter number to find factorial of it : 5

Factorial of given no 5 is : 120

## AIM :–

Write a program to create functions for following

i         Input details of employee using input\_data() (name, employee id, number of working days, date of joining, initial salary, contact number, designation, department)

ii       Calculate monthly salary using calc\_salary()

iii     Display the monthly salary with deductions if any using display()

## PROGRAM CODE :-

#include <stdio.h>

char name[50];

int emp\_id;

int num\_work\_days;

char doj[10];

int salary;

long long contact\_num;

char designation[15];

char deptt[20];

int mon\_salary;

void input\_data();

void calc\_salary();

void display();

int main()

{

input\_data();

calc\_salary();

display();

return 0;

}

void input\_data()

{

printf("Enter name of the Employee:");

scanf("%s", name);

printf("Enter emp\_id of the Employee:");

scanf("%d", &emp\_id);

printf("Enter number of working days:");

scanf("%d", &num\_work\_days);

printf("Enter date of joining:");

scanf("%s", doj);

printf("Enter salary:");

scanf("%d", &salary);

printf("Enter contact\_num:");

scanf("%lld", &contact\_num);

printf("Enter designation:");

scanf("%s", designation);

printf("Enter deptt:");

scanf("%s", deptt);

printf("\nName is:%s",name);

printf("\nEmployee ID is:%d", emp\_id);

printf("\nNumber of working days are:%d", num\_work\_days);

printf("\nDate of joining is:%s", doj);

printf("\nSalary is:%d", salary);

printf("\ncontact\_num is:%lld", contact\_num);

printf("\ndesignation is:%s", designation);

printf("\ndeptt is:%s", deptt);

}

void calc\_salary()

{

mon\_salary=salary/30\*num\_work\_days;

}

void display()

{

int deduct;

printf("\n\nMonthly salary of %s is:%d",name,mon\_salary);

printf("\n\nEnter the deductions of salary if any(in Rs):");

scanf("%d",&deduct);

mon\_salary= mon\_salary - deduct;

printf("\nMonthly salary of %s is:%d",name,mon\_salary);

}

## OUTPUT :-

Enter name of the Employee:yAS YASH

Enter emp\_id of the Employee:5009

Enter number of working days:30

Enter date of joining:17/AUG

Enter salary:1000000

Enter contact\_num:8618097212

Enter designation:MANE PIOLET

Enter deptt:1200

Name is:YASH

Employee ID is:5009

Number of working days are:30

Date of joining is:17/AUG

Salary is:1000000

contact\_num is:8618097212

designation is:PIOLET

deptt is:1200

Monthly salary of YASH is:999990

Enter the deductions of salary if any(in Rs):12.36

Monthly salary of YASH is:999978

## AIM :–

Store age of all students of your class in an array. Pass this array as an argument and find average height of the class and return it to calling function.

## PROGRAM CODE :-

#include<stdio.h>

float avg\_ht(int age[],int n);

int main()

{

int age[30],n,i;

float ah;

printf("Enter no. of students in the class:");

scanf("%d",&n);

for(i=0;i<n;i++)

{

printf("\nEnter age of student %d:",i+1);

scanf("%d",&age[i]);

}

ah=avg\_ht(age,n);

printf("Average height of class is:%f",ah);

return 0;

}

float avg\_ht(int age[],int n)

{

int h[n],i;

float avg,sum=0.0;

for(i=0;i<n;i++)

{

if(age[i]==16)

h[i]=168;

else if(age[i]==17)

h[i]=170;

else if(age[i]==18)

h[i]=172;

else if(age[i]==19)

h[i]=175;

sum=sum+h[i];

avg=sum/n;

}

return avg;

}

## OUTPUT :-

Enter no. of students in the class:5

Enter age of student 1:18

Enter age of student 2:17

Enter age of student 3:18

Enter age of student 4:19

Enter age of student 5:21

Average height of class is:1297603.375000

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. | Worksheet Completion including writing learning objective/ Outcome | 10 |  |
| 2. | Post Lab Quiz Result | 5 |  |
| 3. | Student engagement in Simulation/ Performance/ Pre Lab Questions | 5 |  |
| 4. | Total Marks | 20 |  |