***Arjun Patel***

***Assignment 6***

FRN-006

Q) Ferenhit to Celcius

*#include*<stdio.h>

void ferenhitToCelcius(float*\**);

int main(){

    float F;

    printf("Enter temperature Value in ferenhit\n");

    scanf("%f", *&*F);

    ferenhitToCelcius(*&*F);

*return* 0;

}

void ferenhitToCelcius(float*\** F){

*// return ((F-32) \* 5/9);*

    printf("%0.2f Ferenhit = %.2f degree celsius\n",*\**F, ((*\**F*-*32) *\** 5*/*9));

*// f-32 \*\* 5/9*

}

Q)Area and Perimeter of rectangle and circle

*#include*<stdio.h>

void findAreaNPerimeterOfRect(int*\**, int*\**);

void findAreaNPerimeterOfCircle(float*\**);

void findAreaNPerimeterOfRect(int*\** length, int*\** breadth){

    printf("Area of rectangle is %d\n", *\** length *\**  *\**breadth);

    printf("perimeter of rectangle is %d\n", 2 *\** (*\**length*+\**breadth));

*// return length\*breadth;*

}

void findAreaNPerimeterOfCircle(float*\** radius){

*// return 2 \* 3.14 \* radius;*

    printf("Area of circle is %.2f\n", 3.14 *\**  (*\**radius) *\**  (*\**radius));

    printf("perimeter of circle is %.2f\n", 2 *\** 3.14 *\** (*\**radius));

}

int main(){

    int length, breadth;

    printf("Enter Length and breadth for finding Area of rectangle\n");

    scanf("%d %d", *&*length, *&*breadth);

    findAreaNPerimeterOfRect(*&*length, *&*breadth);

    float radius;

    printf("Enter radius value for finding Perimeter of circle\n");

    scanf("%f", *&*radius);

    findAreaNPerimeterOfCircle(*&*radius);

*return* 0;

}

Q)Sum of digits and reverse

*// find sum of 3 digit num and reverse it*

*#include*<stdio.h>

void findSumOfDigits(int*\**);

void findReverse(int, int,int,int);

int main(){

    int num;

    printf("Enter a 3 digit number to find sum of digit: \n");

    scanf("%d", *&*num);

    findSumOfDigits(*&*num);

*return* 0;

}

void findSumOfDigits(int*\** num){

    int temp *=* *\**num;

    int r1 *=* *\**num *%*10; *//3*

*\**num *=* *\**num */*10; *//12*

    int r2 *=* *\**num *%*10;

    int r3 *=* *\**num */*10;

    printf("Sum of %d is %d\n", temp, r1*+*r2*+*r3);

    findReverse(r1,r2,r3, *\**num);

}

void findReverse(int r1, int r2, int r3, int num){

    printf("Reverse num of %d is %d\n", num, (r1*\**100)*+*(r2*\**10)*+*r3);

}

Q)Find odd even using pointer

*#include* <stdio.h>

void checkEvenOdd(int*\**);

int main()

{

    int num;

    printf("Enter Number:\n");

    scanf("%d", *&*num);

*// checkEvenOdd() ? printf("Even Number\n") : printf("Odd Number\n");*

    checkEvenOdd(*&*num);

*return* 0;

}

void checkEvenOdd(int*\** num)

{

*\**num *%* 2 *?* printf("%d is odd num\n",*\**num) *:* printf("%d is even num\n", *\**num);

*// return !num%2;2*

}

Q)Find Salary

*#include*<stdio.h>

*// if basic <= 5000 da,ta, hra -> 10%,20,30*

*// otherwise 15,25,30*

void calSalary(float*\**);

int main(){

    float basic;

    printf("Enter Basic of Salary\n");

    scanf("%f", *&*basic);

*// printf("Salaray is %.2f\n",calSalary());*

    calSalary(*&*basic);

    printf("End\n");

*return* 0;

}

void calSalary(float*\** basic){

    float salary;

*if*(*\**basic *<=*5000){

        salary *=* *\**basic *+* (*\**basic *\** 10)*/*100 *+* (*\**basic *\** 20)*/*100 *+* (*\**basic*\**30)*/*100;

    }

*else*

        salary *=* *\**basic *+* (*\**basic *\** 15)*/*100 *+* (*\**basic *\** 25)*/*100 *+* (*\**basic*\**30)*/*100;

    printf("Salary is %.2f\n", salary);

*// return salary;*

}

Q)Find eligibility for marriage

*#include* <stdio.h>

void checkEligibility(int*\**, char*\**);

int main()

{

    int age;

    char gender;

    printf("Enter Age:\n");

    scanf("%d", *&*age);

    printf("Enter Gender('M'or 'F'):\n");

    fflush(stdin);

    scanf("%c", *&*gender);

*// checkEligibility(age, gender) ? printf("Eligible For Marriage\n") : printf("Not Eligible For Marriage\n");*

    checkEligibility(*&*age, *&*gender);

*return* 0;

}

void checkEligibility(int*\** age,char*\** gender)

{

*if* (*\**gender *==* 'M' *||* *\**gender*==*'m')

    {

*\**age*>=*21 *?* printf("Gender -> %c\nAge -> %d\nEligible for marriage", *\**gender, *\**age)*:* printf("Gender -> %c\nAge -> %d\nNot Eligible for marriage", *\**gender, *\**age);

*// age>=21 ? return 1 : return 0;*

*// if (age >= 21) return 1;*

    }

*else* *if*(*\**gender *==* 'F' *||* *\**gender*==*'f')

    {

*// if (age >= 18) return 1;*

*// age>=18 ? return 1: return 0;*

*\**age*>=*18 *?* printf("Gender -> %c\nAge -> %d\nEligible for marriage", *\**gender, *\**age)*:* printf("Gender -> %c\nAge -> %d\n Not Eligible for marriage", *\**gender, *\**age);

    }

*else* printf("Invalid Input!!\n");

*// return 0;*

}

Ques from Assignment - 2

Q)Discount on bill amount

*#include*<stdio.h>

void calNetPrice(int*\**, int*\**);

int main(){

    int price, discount;

    printf("Enter price:\n");

    scanf("%d", *&*price);

    printf("Enter discount percentage Example: 20\n");

    scanf("%d", *&*discount);

*// printf("Your net price to be paid is:  %d\n", calNetPrice());*

    calNetPrice(*&*price, *&*discount);

    printf("End\n");

*return* 0;

}

void calNetPrice(int*\** price, int*\** discount){

    printf("Your net price to be paid is:  %d\n", *\**price *-* (((*\**price)*\**(*\**discount))*/*100));

*// return price - (price\*discount)/100;*

}

Q)Find greatest among three numbers

*#include*<stdio.h>

void findGreatest(int*\**, int*\**, int*\**);

int main(){

    printf("Start\n");

    int a,b,c;

    printf("Enter the value of a: ");

    scanf("%d",*&*a);

    printf("Enter the value of b: ");

    scanf("%d",*&*b);

    printf("Enter the value of c: ");

    scanf("%d",*&*c);

    findGreatest(*&*a,*&*b,*&*c);

    printf("End\n");

*return* 0;

}

void findGreatest(int*\** a, int*\** b,int*\** c){

    int greatest;

*if*(*\**a*>\**b){

*if* (*\**a*>\**c)

        {

            greatest *=* *\**a;

        }

*else*

        {

            greatest *=* *\**c;

        }

    } *else* {

*if*(*\**b*>\**c){

            greatest *=* *\**b;

        }

*else* {

            greatest *=* *\**c;

        }

    }

    printf("%d is Greatest of three.\n", greatest);

}

Q)Basic Operations

*#include* <stdio.h>

void showChoices(int*\**, int*\** ,char*\**);

int main()

{

    printf("Start\n");

    int num1, num2;

    char operator;

    printf("Enter the value of number 1: ");

    scanf("%d", *&*num1);

    printf("Enter the value of number 2: ");

    scanf("%d", *&*num2);

    printf("------Enter your choice :------\n");

    printf("For Addition enter '+'\n");

    printf("For Subtraction enter '-'\n");

    printf("For Multiplication enter '\*'\n");

    printf("For Divivsion enter '/'\n");

    printf("For Modulo enter '*%*'\n");

    fflush(stdin);

    scanf("%c", *&*operator);

*// printf("Answer is %d\n", showChoices());*

    showChoices(*&*num1, *&*num2, *&*operator);

    printf("End\n");

*return* 0;

}

void showChoices(int*\** num1, int*\** num2, char*\** operator){

*if* (*\**operator*==* '+')

    {

        printf("%d %c %d = %d\n", *\**num1, *\**operator, *\**num2, *\**num1 *+* *\**num2);

*// return num1+num2;*

    }

*else* *if* (*\**operator*==* '-')

    {

        printf("%d %c %d = %d\n", *\**num1, *\**operator, *\**num2, *\**num1 *-* *\**num2);

*// return num1-num2;*

    }

*else* *if* (*\**operator*==* '\*')

    {

        printf("%d %c %d = %d\n", *\**num1, *\**operator, *\**num2, *\**num1 *\** *\**num2);

*// return num1\*num2;*

    }

*else* *if* (*\**operator*==* '/')

    {

        printf("%d %c %d = %d\n", *\**num1, *\**operator, *\**num2, *\**num1 */* *\**num2);

*// return num1 / num2;*

    }

*else* *if* (*\**operator*==* '%')

    {

        printf("%d %c %d = %d\n", *\**num1, *\**operator, *\**num2, *\**num1 *%* *\**num2);

*// return num1 % num2;*

    }

}

Q)Menu driven

*#include* <stdio.h>

void checkEvenOdd(int*\**);

void calculateSalary(float*\**);

int main()

{

    int choiceNum;

    printf("----Choices-----\n");

    printf("Enter 1 for calculate Even odd\n");

    printf("Enter 2 for calculate Salary\n");

    scanf("%d", *&*choiceNum);

*if* (choiceNum *==* 1)

    {

*// checkEvenOdd() ? printf("EVEN number\n") : printf("ODD number\n");*

        int num;

        printf("Enter number to check weather number is even or odd.\n");

        scanf("%d", *&*num);

        checkEvenOdd(*&*num);

    }

*else* *if* (choiceNum *==* 2)

    {

*// printf("Salary is %.2f\n",calculateSalary());*

        float basic;

        printf("Enter Basic salary\n");

        scanf("%f", *&*basic);

        calculateSalary(*&*basic);

    }

*else*

    {

        printf("Invalid Choice\n");

    }

*return* 0;

}

void checkEvenOdd(int*\** num)

{

*\**num *%* 2 *?* printf("%d is Odd Number\n", *\**num) *:* printf("%d is Even number\n", *\**num);

*// return !num%2;*

}

void calculateSalary(float*\** basic)

{

    float salary;

*if* (*\**basic *<=* 5000)

    {

        salary *=* *\**basic *+* (*\**basic *\** 10) */* 100 *+* (*\**basic *\** 20) */* 100 *+* (*\**basic *\** 30) */* 100;

    }

*else*

        salary *=* *\**basic *+* (*\**basic *\** 15) */* 100 *+* (*\**basic *\** 25) */* 100 *+* (*\**basic *\** 30) */* 100;

    printf("Salary is %.2f\n", salary);

*// return salary;*

}

Q)Student Discount

*#include* <stdio.h>

void checkIsStudent(char*\**, float*\**);

int main()

{

    printf("Start\n");

    float price;

    int discount;

    printf("\nEnter price: ");

    scanf("%f", *&*price);

    char checkStudent;

    printf("If your are student than press 'Y', else press 'N'\n");

    fflush(stdin);

    scanf("%c", *&*checkStudent);

    checkIsStudent(*&*checkStudent, *&*price);

    printf("End\n");

*return* 0;

}

void checkIsStudent(char*\** checkStudent, float*\** price)

{

    int discount;

*if* (*\**checkStudent *==* 'y' *||* *\**checkStudent *==* 'Y')

    {

        discount *=* *\**price *>* 500 *?* 20 *:* 10;

    }

*else* *if* (*\**checkStudent *==* 'n' *||* *\**checkStudent *==* 'N')

    {

        discount *=* *\**price *>* 600 *?* 15 *:* 0;

    }

*else*

        printf("Invalid choice for student elligibility\n");

    printf("You got %d*\%* Discount\n", discount);

    printf("You have to pay %.2f rs.\n", *\**price *-* (*\**price *\** discount) */* 100);

}

Q)Armstrong number in range 1 to n

*#include* <stdio.h>

*#include* <math.h>

*// if 123 is num, and 1^3 + 2^3 + 3^3 = 123, then its armstrong num*

*// example 153 = 1 + 125+ 27 is armstrong num*

*// 1634 = 1^4 + 6^4 + 3^4 + 4^4*

void printArmstrongNum(int *\**);

int main()

{

    printf("Start\n");

    int num;

    printf("Enter a number upto which u want to armstrong nums:\n");

    scanf("%d", *&*num);

    printArmstrongNum(*&*num);

    printf("End\n");

*return* 0;

}

void printArmstrongNum(int *\**num)

{

*for* (int i *=* 1; i *<=* *\**num; i*++*)

    {

        int temp *=* i, sum *=* 0, count *=* 0;

*// find length of number to find exponent*

*while* (temp *>* 0)

        {

            count*++*;

            temp */=* 10;

        }

*// temp becomes 0, so ressign for further use*

        temp *=* i;

*while* (temp *>* 0)

        {

            int rem *=* temp *%* 10;

*// cal power of rem*

            int power *=* 1, exponent *=* count;

*while* (exponent*--*)

            {

                power *\*=* rem;

            }

            sum *+=* power;

            temp */=* 10;

        }

        sum *==* i *&&*printf("%d ", i);

    }

}

Q)Prime number in range 1 to n

*#include* <stdio.h>

void checkPrime(int*\** num)

{

*for* (int j *=* 1; j *<=* *\**num; j*++*)

    {

        int isPrime;

*for* (int i *=* 2; i *\** i *<=* j; i*++*)

        {

            isPrime *=* 1;

*if* (j *%* i *==* 0)

            {

                isPrime *=* 0;

*break*;

            }

        }

*if* (isPrime)

        {

            printf("%d ", j);

        }

    }

}

int main()

{

    int num, isPrime *=* 1, j;

    printf("Enter number upto which u want to check prime of\n");

    scanf("%d", *&*num);

    checkPrime(*&*num);

*return* 0;

}

Q)Find perfect number in range 1 to n

*#include* <stdio.h>

*// number can be called perfect if, sum of its divisors is same as number itself*

*// ex: 6 because 1 + 2 + 3 = 6*

*// 28 beacuse, 1 +2 + 4 + 7 + 14 =28*

void checkPerfect(int*\** num)

{

*for* (int j *=* 1; j *<=* *\**num; j*++*)

    {

        int sum *=* 0;

*for* (int i *=* 1; i *<=* j */* 2; i*++*)

        {

*if* (j *%* i *==* 0)

                sum *+=* i;

        }

*if* (j *==* sum)

        {

            printf("%d ", j);

        }

    }

}

int main()

{

    int num;

    printf("Upto which range u want to check perfect num: ");

    scanf("%d", *&*num);

    checkPerfect(*&*num);

*return* 0;

}

Q)Check Strong num in range 1 to n

*#include* <stdio.h>

*// num is called strong if its sum of its digit's factorial is same as num*

*// ex: 145, 1! + 4!+ 5! = 145*

*// not optimized as in will open and close function stack frame multiple time*

void checkStrong(int*\** num)

{

*for* (int i *=* 1; i *<=* *\**num; i*++*)

    {

        int temp *=* i, rem, sum *=* 0;

*while* (temp *>* 0)

        {

            rem *=* temp *%* 10;

*//--------Factorial Part-------*

*// find factorial of rem*

            int factorial *=* 1;

*while* (rem *>* 0)

            {

                factorial *\*=* rem;

                rem*--*;

            }

*// add factorial of rem to sum*

            sum *+=* factorial;

*// continue*

            temp */=* 10;

        }

*if* (sum *==* i)

            printf("%d ", i);

    }

}

int main()

{

    int num;

    printf("Enter a number:\n");

    scanf("%d", *&*num);

    checkStrong(*&*num);

*return* 0;

}

Q)Fibonacci In Range

*#include*<stdio.h>

*//0 1 1 2 3 5 8 13 21 34 55*

void printFibonacciInRange(int*\**);

int main(){

    printf("Start\n");

    int num;

    printf("Enter a number upto which u want to print fibonacci series\n");

    scanf("%d", *&*num);

    printFibonacciInRange(*&*num);

    printf("End\n");

*return* 0;

}

void printFibonacciInRange(int*\** num) {

    int first *=*0, second *=* 1, next *=* 0;

*while* (next*<=\**num)

    {

        printf("%d ", next);

        first *=* second;

        second *=* next;

        next *=* first *+* second;

    }

}

***END***