**Lab Manual 2 CSE 115 (ARA2)**

**Practice Problems:**

1. **C Program to demonstrate change of values of a variable.**

|  |
| --- |
| #include<stdio.h>  #include<math.h>  void main()  {  float a, b;  printf("Enter a number:");  scanf("%f",&a);  b = a;  a = a+1;  printf("%f, %f", a, b);  } |

1. **C Program to compute squared root and cube of an input number.**

|  |
| --- |
| #include<stdio.h>  #include<math.h>  void main()  {  float a;  printf("Enter a number:");  scanf("%f",&a);  printf("%f, %f",sqrt(a), pow(a,3));  } |

1. **C program to print size of variables of different data types.**

#include<stdio.h>

void main()

{

printf("size of char: %d", sizeof(char));

printf("\nsize of int: %d", sizeof(int));

printf("\nsize of float: %d", sizeof(float));

printf("\nsize of double: %d", sizeof(double));

}

1. **C Program to convert a lowercase letter to uppercase:**

|  |
| --- |
| #include<stdio.h>  void main()  {  char a;  printf("enter a lowercase character:");  scanf("%c",&a);  printf("%c",a-32);  } |

**Try yourself:** Write a program that converts an uppercase letter to lowercase.

1. **C program to print the last digit of a number and all the other digits of it:**

#include<stdio.h>

void main()

{

int n;

printf("Enter an integer: ");

scanf("%d", &n);

int last = n%10;

int others = n/10;

printf("last digit: %d", last);

printf("\nOther digits: %d", others);

}

1. **C program to convert days to years weeks and days**

#include <stdio.h>

void main()

{

int days, years, weeks;

// Read total number of days (since the year 0 A.D.) printf("Enter days: ");

scanf("%d", &days);

// Converts days to years, weeks and days

years = days/365; //Ignoring leap year

weeks = (days%365)/7;

days = days- ((years\*365) + (weeks\*7));

printf("YEARS: %d\n", years);

printf("WEEKS: %d\n", weeks);

printf("DAYS: %d", days);

}

**Homework Questions:**

1. **Compute the value of 5x3-4x2+√(x)+3; read x from user**
2. **Solve the equation: ax****2+bx+c=0 and print the solutions. Read a,b,c from user**

**Hint: compute the values of (-b+sqrt(b2-4ac))/2a and (-b-sqrt(b2-4ac))/2a; here sqrt is a C function that computes the squared root of a number**

1. **Find the volume of a (a) cube and (b) cylinder**

**Note: Read necessary inputs from user e.g. height and diameter of the cylinder for (a)**

1. **Compute quotient and remainder when you divide x by y** **(read x, y from user). Also, compute quotient and remainder when you divide y by x. Print all these four results.**
2. **Read a temperature in Celsius and print its Fahrenheit equivalent (Hint: C=(F-32)\*5/9)**
3. **Print the sum of the series:1+2+...+n; read n from user (Hint: 1+2+...+n= n(n-1)/2)**
4. **Print the sum of the series:12+22+...+n2; read n from user.**