Department of Computer Science and Engineering

Institute of Technical Education & Research, SOA, Deemed to be University

MINOR ASSIGNMENT-01

Practical Programming with C (CSE 3544)

Publish on: 14-10-2025 Course Outcome: CO₁

Program Outcome: PO₁

Submission on: 19-10-2025

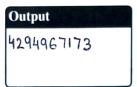
Learning Level: L4

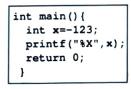
Problem Statement:

Experiment with program flow mechanisms.

1. Write the output of the following code snippet.

```
int main() {
   int x=-123;
   printf("%u",x);
   return(0);
}
```



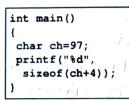


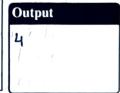


2. Write the output of the following code snippet.

```
int main(){
  char ch='A';
  printf("%d",sizeof(ch));
  printf("%d",sizeof('A'));
  return(0);
}
```

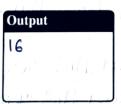


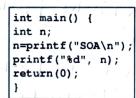


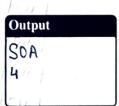


3. Write the output of the following code snippet.

```
int main() {
  int sum;
  sum = 2 + 4 / 2 + 6 * 2;
  printf("%d", sum);
  return 0;
}
```







() / n + 1

- 4. You are tasked with creating a C program to convert a given distance (in meters) to various other units commonly used in science. Your program should prompt the user for a distance in meters and then display a table that converts this distance into Kilometers, Centimeters, Millimeters, Feet, and Inches. The program must satisfy the following requirements.
 - (a) Prompt the user to enter a distance in meters (floating-point number).
 - (b) Perform the necessary conversions using the following relationships:
 - 1 meter = 0.001 kilometers
 - 1 meter = 100 centimeters
 - 1 meter = 1000 millimeters
 - 1 meter = 3.28084 feet
 - 1 meter = 39.3701 inches

(c) Display the conversions in a neatly aligned table using printf with appropriate format specifiers as

Enter distance in meters: 12.5

Unit +	Value
Meters Kilometers Centimeters Millimeters Feet Inches	12.50 0.01 1250.00 12500.00 41.01 492.13
1111, 5, 1, 1	/ /

```
Write program here
#include <stdio.h>
   Fleat meters
   Printf ("Enter distance in meders:");
   scanf ("/, f", Limeters);

printf ("/n+----+/n");
   print (" | 1/-165 | 1/-165 | /n", "Unit", "Value");
   print f ("1 1/-16s / 1/-16.2f //n", "Meters", meters);
    printf("17.-165 | 1.-16.2f | In", "Kilometers", meters +0.001);
    print (" | 1/-163 | 1/-16.24 | /n", "Centimeters", meters *100);
    printf("1%-165/1-16.2f/\n", "Millimeters", meters *1000);
     printf("/1.-165/1.-16.2f/n", "Feet", meters + 3.28084);
     print (" | 7.-165 | 7.-16.2f | In", "Inches", meters & 39.3701);
     print ("+ ----+ \n");
     converse ;
```

5. Write a program that predicts the score needed on a final exam to achieve a desired grade in a course.

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The program should interact with the user as follows:

Enter desired grade> B
Enter minimum average required> 79.5
Enter current average in course> 74.6
Enter how much the final counts
as a percentage of the course grade> 25

You need a score of 94.20 on the final to get a B.

A sible whilmill

```
Write program here
                                                   diller holl
# include < Stdio.h>
 int main () {
    char grade;
    float min-any, coment-any, final-weight, needed;
    print ("Enter desired grade>");
    scant ("7.c" & grade);
wintt ("Enter minimum overage orequired?");
     scart (", f", kmin-aug);
     scart (". f; & current average in courses");
     print ("Enter how much the final counts In as a percentage
              of the course grade > ");
     Scanf ("/of", Lifinal_useight);
    needed = (min ang - (100 - final weight) + current ang/100)/
              (final-weight /100);
   printf ("In You need a score of 1.2f on the final to get a 1.c. In",
   needed, grade);
```

6. Write a program that calculates the acceleration (m/s²) of a jet fighter launched from an aircraft-carrier catapult, given the jets takeoff speed in km/hr and the distance (meters) over which the catapult accelerates the jet from rest to takeoff. Assume constant acceleration. Also calculate the time (seconds) for the fighter to be accelerated to takeoff speed. When you prompt the user, be sure to indicate the units for each input. For one run, use a takeoff speed of 278 km/hr and a distance of 94 meters. Relevant formulas (v = velocity, a = acceleration, t = time, and s = distance)



$s = \frac{1}{2}at^2$

Write program here # include < staio.h > # include < mathoh > 3 C) rism tri float V-kmh = 278, 8=94; float vins o, a, t; Vims = Vikmh * 1000/3600; a = (v-ms + v-ms) (2 ks); " - (10000) . 100 10 1000 1 t = 1-ms/a; print ("Take off speed: 7.2f km/h, (1.2f m/s) \n", v_kmh, v_ms); print f ("Distance: 1.2f m/n, s);

print f ("Acceleration: 1.2f m/sn 2 ln", a); +1) +billy printf(" Time to take off: 7.2f sln", t); partier of a state of state of the linguistic out of their 1245 (1/2-115 1/2-115 (qu) (to posas , Smit)