**TUTORIAL 8 SOLUTIONS**

**Question 2**

Write a printf or scanf statement for each of the following:

1. Print unsigned integer 40000 left justified in a 15-digit field with 8 digits.

printf("%-15.8u\n", 40000);

1. Read a hexadecimal value into variable hex.

int hex;

printf("Enter a hex value: ");

scanf("%i", &hex);

printf("The decimal value is %d and the hex value is %#x\n", hex, hex);

1. Print 200 with and without a sign.

int x=200;

printf("Enter value of x without sign is %d\n",x);

printf("Enter value of x with sign is %+d\n",x);

1. Print 100 in hexadecimal form preceded by 0x.

int y=100;

printf("The value is hex form is %#x\n",y);

1. Read characters into array s until the letter p is encountered.

char str[100];

scanf("%[^p]", str);

printf("The string is %s\n", str);

1. Print 1.234 in a 9-digit field with preceding zeros.

printf("%010g\n", 1.234);

1. Read a time of the form hh:mm:ss, storing the parts of the time in the integer variables hour, minute and second. Skip the colons (:) in the input stream. Use the assignment suppression character.

int hours, minutes, seconds;

printf("Enter the time in hh:mm:ss format: ");

scanf("%d%\*c%d%\*c%d", &hours, &minutes, &seconds);

printf("Hours = %d, Minutes = %d, Seconds = %d\n", hours, minutes, seconds);

**Question 3**

#include <stdio.h>

int main()

{

int F;

float C;

printf("%10s%10s\n", "Farenheit", "Celcius");

for (F = 0; F <= 212; F++)

{

C = 5.0 / 9.0\*(F - 32);

printf("%10d%#+10.3g\n", F, C);

}

return 0;

}

**Question 4**

#include <stdio.h>

int main()

{

int x, n;

for (n = 1; n <= 3; n++)

{

printf(" is the integer entered\r");

scanf("%d", &x);

}

return 0;

}

**Question 5**

#include <stdio.h>

int main()

{

printf("%5d\n", 5);

printf("%6d\n", 454);

printf("%7d\n", 34543);

printf("%8d\n", 2345432);

printf("%9d\n", 123454321);

return 0;

}

**Question 6**

#include <stdio.h>

int main()

{

printf("Nearest digit %.3g\n", 100.453627);

printf("Nearest tenth %.4g\n", 100.453627);

printf("Nearest hundreth %.5g\n", 100.453627);

return 0;

}

**Question 7**

#include <stdio.h>

int main()

{

int n4,n3,n2,n1,n0;

printf("Enter a 5-digit integer:");

scanf("%1d%1d%1d%1d%1d", &n4,&n3,&n2,&n1,&n0);

printf("The sum of all 5 digits is ", n4+n3+n2+n1+n0);

return 0;

}

**Question 8**

#include <stdio.h>

int main()

{

char c1, c2;

int day, month, year;

printf("Enter the date in dd/mm/yyyy format: ");

scanf("%d%c%d%c%d", &day, &c1, &month, &c2, &year);

printf("Day = %d, Month = %d, Year = %d\n", day, month, year);

return 0;

}

OR

#include <stdio.h>

int main()

{

char str[11];

int day, month, year;

printf("Enter the date in dd/mm/yyyy format: ");

scanf("%s", str);

day = (str[0] - 48) \* 10 + (str[1] - 48);

month = (str[3] - 48) \* 10 + (str[4] - 48);

year = (str[6] - 48) \* 1000 + (str[7] - 48) \* 100 + (str[8] - 48) \* 10 + (str[9] - 48);

printf("Day = %d, Month = %d, Year = %d\n", day, month, year);

return 0;

}