Day – 1 Assignment

1 ) Write a C program to convert a temperature from Centigrade to Fahrenheit

#include<stdio.h>

void calc(int salary, int isMetroCity);

int main(){

int salary, isMetroCity;

scanf("%d %d", &salary, &isMetroCity);

calc(salary, isMetroCity);

return 0;

}

void calc(int salary, int isMetroCity) {

int DA, HRA, PF = 900, MA = 580, grossSalary;

if(isMetroCity == 1)

DA = 0.40 \* salary;

else if(isMetroCity == 0)

DA = 0.30 \* salary;

else

printf("Invalid");

HRA = 0.15 \* salary;

grossSalary = salary + DA + HRA - PF - MA;

printf("DA: %d\nHRA: %d\nGross Salary: %d", DA, HRA, grossSalary);

}



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2.

#include <stdio.h>

int main() {

double crudeOil = 50.75;

double taxes = 10.25;

double otherFActors = 5.55;

double pricePerLiter = crudeOil+ taxes+ otherFActors;

printf("%.2f", pricePerLiter);

return 0;

}



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3.

#include <stdio.h>

int main() {

int num1 = 10, num2 = 20;

if(num1 > num2) printf("Num1");

else printf("Num2");

return 0;

}



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4.

#include <stdio.h>

int main() {

int Number[] = {3, 5, 1, 9, 2};

int max = Number[0];

for(int i = 0; i < sizeof(Number)/sizeof(Number[0]); i++){

if(Number[i] > max)

max = Number[i];

}

printf("%d", max);

return 0;

}

Max = Number[0] // 3

|  |  |  |  |
| --- | --- | --- | --- |
| Iteration i | Number[i] | Number[i] > Max | New Max |
| 0 | 3 | 3 > 3 = false | 3 |
| 1 | 5 | 5 > 3 = true | 5 |
| 2 | 1 | 1 > 5 = false | 5 |
| 3 | 9 | 9 > 5 = true | 9 |
| 4 | 2 | 2 > 9 = false | 9 |

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5.

#include <stdio.h>

int centToFahrein(int cent);

int main() {

int cent;

scanf("%d", &cent);

int res = centToFahrein(cent);

printf("%d", res);

}

int centToFahrein(int cent) {

return (cent \* 9/5) + 32;

}

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6. Completre the following program : from Dannis Ritchie and Perform the Tracing on every variable in columner fashion.

#include <stdio.h>

#define IN 0

#define OUT 0

int main() {

    int c, nl, nw, nc, state;

    state = OUT;

    nl =nw=nc = 0;

    while((c = getchar())!=EOF){

        ++nc;

        if(c=='\n') ++nl;

        if(c == ' ' || c=='\n' || c=='\t') state = OUT;

        else if(state == OUT){

            state = IN;

            ++nw;

        }

    }

    printf("lines: %d\nwords: %d\nchars: %d", nl,nw,nc);

}

| **Step** | **Charcter** | **State** | **nl (lines)** | **Nw (words)** | **Nc (chars)** |
| --- | --- | --- | --- | --- | --- |
| 1 | H | IN | 0 | 1 | 1 |
| 2 | E | IN | 0 | 1 | 2 |
| 3 | L | In | 0 | 1 | 3 |
| 4 | L | In | 0 | 1 | 4 |
| 5 | O | In | 0 | 1 | 5 |
| 6 | ‘ ’ | Out | 0 | 1 | 6 |
| 7 | W | In | 0 | 2 | 7 |
| 8 | O | In | 0 | 2 | 8 |
| 9 | R | In | 0 | 2 | 9 |
| 10 | L | In | 0 | 2 | 10 |
| 11 | D | In | 0 | 2 | 11 |

