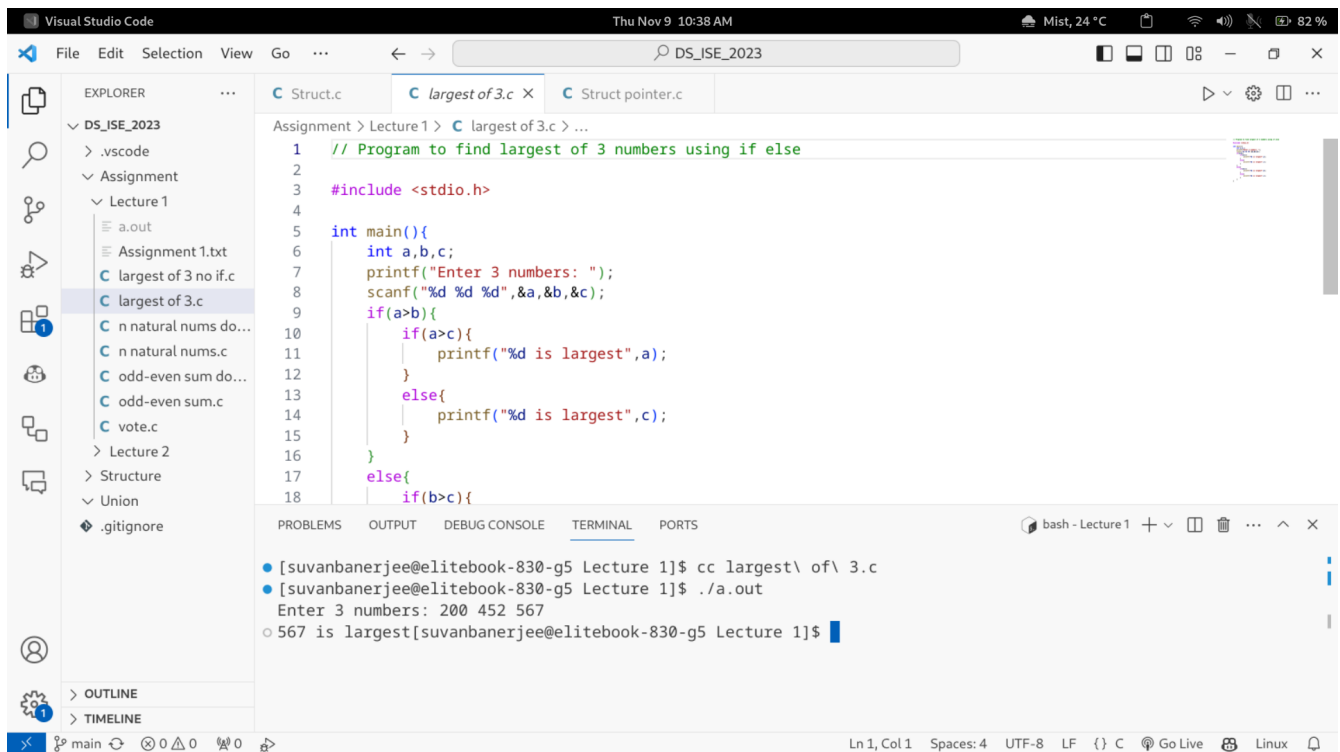


// Program to find largest of 3 numbers using if else

```
#include <stdio.h>

int main(){
int a,b,c;
printf("Enter 3 numbers: ");
scanf("%d %d %d",&a,&b,&c);
if(a>b){
if(a>c){
printf("%d is largest",a);
}
else{
printf("%d is largest",c);
}
}
else{
if(b>c){
printf("%d is largest",b);
}
else{
printf("%d is largest",c);
}
}
return 0;
}
```



The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows the project structure for 'DS\_JSE\_2023', including files like 'a.out', 'Assignment 1.txt', and 'largest of 3.c'. The main editor window shows the C code for finding the largest of three numbers using if-else statements. The code is as follows:

```
1 // Program to find largest of 3 numbers using if else
2
3 #include <stdio.h>
4
5 int main(){
6     int a,b,c;
7     printf("Enter 3 numbers: ");
8     scanf("%d %d %d",&a,&b,&c);
9     if(a>b){
10         if(a>c){
11             printf("%d is largest",a);
12         }
13         else{
14             printf("%d is largest",c);
15         }
16     }
17     else{
18         if(b>c){
```

The terminal at the bottom shows the execution of the program:

```
bash - Lecture 1
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc largest\ of\ 3.c
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out
Enter 3 numbers: 200 452 567
567 is largest[suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

// Program to find largest of 3 numbers without if else

```
#include <stdio.h>
```

```
int main(){  
int a,b,c,d;  
printf("Enter 3 numbers: ");  
scanf("%d %d %d",&a,&b,&c);  
d = (a>b)? a : b;  
d = (d>c)? d : c;  
printf("%d is largest",d);  
}
```

Visual Studio Code interface showing the C program and its execution.

File Explorer: DS\_ISE\_2023 > Assignment > Lecture 1 > largest of 3 no if.c

Code Editor:

```
1 // Program to find largest of 3 numbers without if else  
2 #include <stdio.h>  
3  
4 int main(){  
5     int a,b,c,d;  
6     printf("Enter 3 numbers: ");  
7     scanf("%d %d %d",&a,&b,&c);  
8     d = (a>b)? a : b;  
9     d = (d>c)? d : c;  
10    printf("%d is largest",d);  
11 }
```

Terminal:

```
bash - Lecture 1  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc largest\ of\ 3\ no\ if.c  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out  
Enter 3 numbers: 23 45 78  
78 is largest[suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

Status Bar: Ln 11, Col 2 (246 selected) Spaces: 4 UTF-8 LF {} C Go Live Linux

//n natural numbers

```
#include <stdio.h>
```

```
int main() {  
    int n, i=1;  
    printf("Enter the value of n: ");  
    scanf("%d", &n);  
    printf("The first %d natural numbers are: ", n);  
    while (i < n+1) {  
        printf("%d ", i++);  
    }  
    return 0;  
}
```

The screenshot shows the Visual Studio Code interface. The Explorer panel on the left displays a project structure with folders for 'DS\_ISE\_2023', 'Assignment', and 'Lecture 1'. The file 'n natural nums.c' is selected. The main editor shows the C code from the previous block. The bottom panel contains a terminal window with the following output:

```
bash - Lecture 1  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc n\ natural\ nums.c  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out  
Enter the value of n: 7  
The first 7 natural numbers are: 1 2 3 4 5 6 7 [suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

//n natural numbers do while

```
#include <stdio.h>
```

```
int main() {  
    int n, i=1;  
    printf("Enter the value of n: ");  
    scanf("%d", &n);  
    printf("The first %d natural numbers are: ", n);  
    do{  
        printf("%d ", i++);  
    } while (i < n+1);  
    return 0;  
}
```

The screenshot shows the Visual Studio Code interface. The Explorer panel on the left displays a project structure with folders for 'DS\_ISE\_2023', 'Assignment', and 'Lecture 1'. The file 'n natural nums do while.c' is selected. The main editor window shows the C code for calculating the first n natural numbers using a do-while loop. The code is as follows:

```
1 #include <stdio.h>  
2  
3 int main() {  
4     int n, i=1;  
5     printf("Enter the value of n: ");  
6     scanf("%d", &n);  
7     printf("The first %d natural numbers are: ", n);  
8     do{  
9         printf("%d ", i++);  
10    } while (i < n+1);  
11    return 0;  
12 }  
13
```

The TERMINAL panel at the bottom shows the execution of the program:

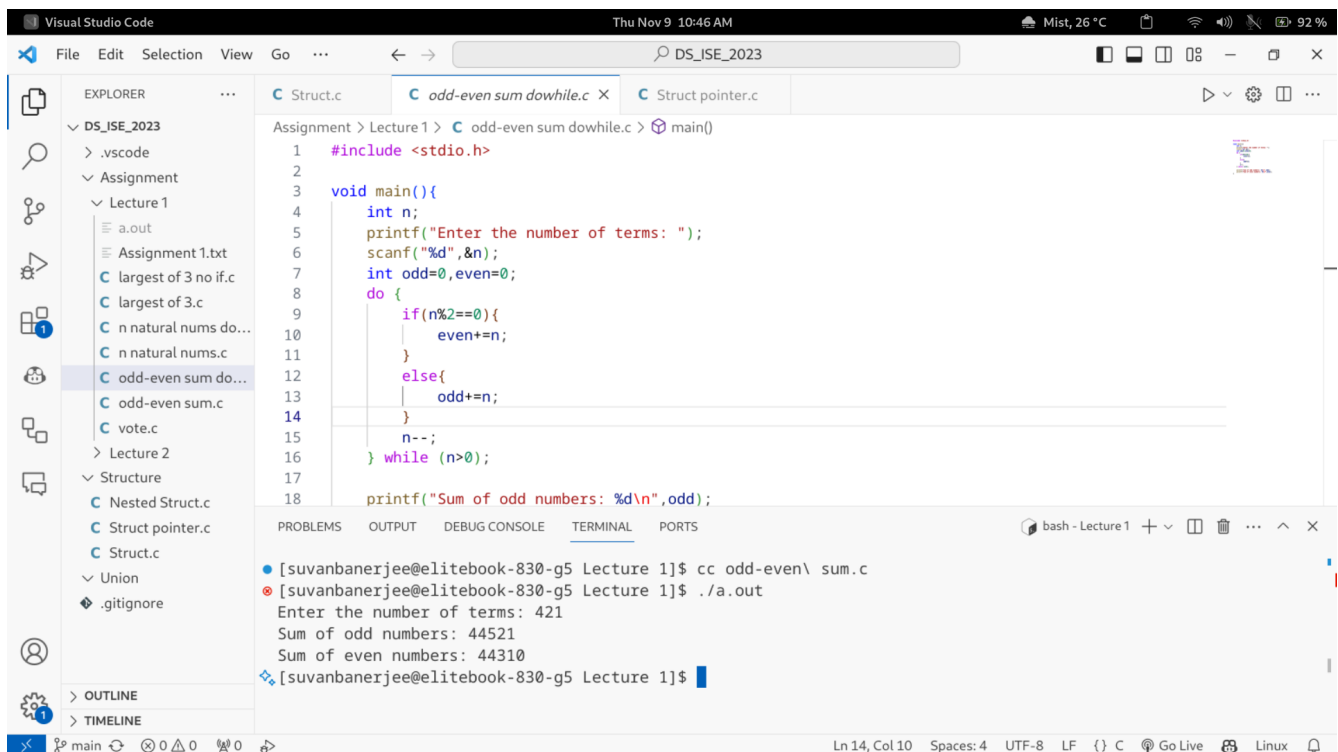
```
bash - Lecture 1  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc n\ natural\ nums\ do\ while.c  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out  
Enter the value of n: 8  
The first 8 natural numbers are: 1 2 3 4 5 6 7 8 [suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

The status bar at the bottom indicates the current line is 13, column 1, with 236 characters selected. The encoding is UTF-8, and the file is saved in Linux format.

//Sum of odd and even number

```
#include <stdio.h>

void main(){
int n;
printf("Enter the number of terms: ");
scanf("%d",&n);
int odd=0,even=0;
do {
if(n%2==0){
even+=n;
}
else{
odd+=n;
}
n--;
} while (n>0);
printf("Sum of odd numbers: %d\n",odd);
printf("Sum of even numbers: %d\n",even);
}
```



Visual Studio Code interface showing the C program for summing odd and even numbers. The Explorer sidebar shows the project structure with 'odd-even sum dowhile.c' selected. The main editor displays the code. The TERMINAL panel at the bottom shows the compilation and execution of the program.

```
Assignment > Lecture 1 > C odd-even sum dowhile.c > main()
1  #include <stdio.h>
2
3  void main(){
4      int n;
5      printf("Enter the number of terms: ");
6      scanf("%d",&n);
7      int odd=0,even=0;
8      do {
9          if(n%2==0){
10             even+=n;
11         }
12         else{
13             odd+=n;
14         }
15         n--;
16     } while (n>0);
17
18     printf("Sum of odd numbers: %d\n",odd);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
bash - Lecture 1
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc odd-even\ sum.c
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out
Enter the number of terms: 421
Sum of odd numbers: 44521
Sum of even numbers: 44310
[suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

Ln 14, Col 10 Spaces: 4 UTF-8 LF {} C Go Live Linux

// Sum of odd even using do while

```
#include <stdio.h>

void main(){
int n;
printf("Enter the number of terms: ");
scanf("%d",&n);
int odd=0,even=0;
while (n>0){
if (n%2==0){
even+=n;
}
else{
odd+=n;
}
n--;
}
printf("Sum of odd numbers: %d\n",odd);
printf("Sum of even numbers: %d\n",even);
}
```

The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows a project named 'DS\_ISE\_2023' with a file 'odd-even sum.c' selected. The main editor window shows the C code for calculating the sum of odd and even numbers using a while loop. The output panel at the bottom shows the execution results: the program was compiled with 'cc odd-even\ sum\ dowhile.c', and when run, it prompted for the number of terms (419) and displayed the sums: 'Sum of odd numbers: 44100' and 'Sum of even numbers: 43890'.

```
Visual Studio Code
Thu Nov 9 10:48 AM
Mist, 26 °C
93 %

File Edit Selection View Go ...
DS_ISE_2023
  .vscode
  Assignment
  Lecture 1
    a.out
    Assignment 1.txt
    largest of 3 no if.c
    largest of 3.c
    n natural nums do...
    n natural nums.c
    odd-even sum do...
    odd-even sum.c
    vote.c
  Lecture 2
  Structure
    Nested Struct.c
    Struct pointer.c
    Struct.c
  Union
  .gitignore

EXPLORER
C Struct.c
C odd-even sum.c
C Struct pointer.c

Assignment > Lecture 1 > C odd-even sum.c > main()
1 #include <stdio.h>
2
3 void main(){
4     int n;
5     printf("Enter the number of terms: ");
6     scanf("%d",&n);
7     int odd=0,even=0;
8     while (n>0){
9         if (n%2==0){
10             even+=n;
11         }
12         else{
13             odd+=n;
14         }
15         n--;
16     }
17     printf("Sum of odd numbers: %d\n",odd);
18     printf("Sum of even numbers: %d\n",even);
19 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
bash - Lecture 1
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc odd-even\ sum\ dowhile.c
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out
Enter the number of terms: 419
Sum of odd numbers: 44100
Sum of even numbers: 43890
[suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

// Program to find you are elligible to vote using while and do while

```
#include <stdio.h>
```

```
int main(){  
int age;  
printf("Enter your age: ");  
scanf("%d",&age);  
while (age >= 18){  
printf("You are elligible to vote\n");  
return 0;  
}  
printf("You are not elligible to vote\n");  
}
```

The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows a project named 'DS\_ISE\_2023' with a file 'vote.c' selected. The main editor window shows the C code for a program that checks if a user is eligible to vote based on their age. The code uses a 'while' loop. The output panel at the bottom shows the execution of the program, demonstrating that for an age of 4, the user is not eligible to vote, and for an age of 40, the user is eligible to vote.

```
Assignment > Lecture 1 > C vote.c > main()  
1 // Program to find you are elligible to vote using while and do while  
2  
3 #include <stdio.h>  
4  
5 int main(){  
6     int age;  
7     printf("Enter your age: ");  
8     scanf("%d",&age);  
9     while (age >= 18){  
10         printf("You are elligible to vote\n");  
11         return 0;  
12     }  
13     printf("You are not elligible to vote\n");  
14 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
bash - Lecture 1  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ cc vote.c  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out  
Enter your age: 4  
You are not elligible to vote  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$ ./a.out  
Enter your age: 40  
You are elligible to vote  
[suvanbanerjee@elitebook-830-g5 Lecture 1]$
```

Ln 14, Col 6 Spaces: 4 UTF-8 LF {} C Go Live Linux