ALPHA INTERN

BAAP OF ALL DSA SERIES

ASSIGNMENT on FUNDAMENTAL OF C++

ASSIGNMENT ON FUNDAMENTAL

1. **Write a program that takes two integers as input and prints their sum.**
2. **Take length and breadth as input (both integers) and calculate the area of the rectangle.**
3. **Take two numbers as input and perform addition, subtraction, multiplication, and division. Display the results.**
4. **Take input of principle, time and rate and find the simple interest**
5. **Take a character as input and print its corresponding ASCII value.**
6. **Take a floating-point number as input, typecast it into an integer, and print both values.**
7. **Take an integer between 65 and 90 as input and print its corresponding uppercase letter.**
8. **What is the output of this program?**

```
int main()
{
int a=4;
int b=5;
a++ ,b-;
cout<<++a<<" " <<b--;
}
```

9. **Predict the output of the following code snippet:**

```
int x= 5;
cout << x++ << " " << ++x;
```

10. **Explain the difference between x++ and ++x in your own words.**
    - **Take an integer as input and:**
    - **Print its value using post-increment (x++).**
    - **Print its value again using pre-increment (++x).**

11. **What will be the output of the following code?**

```
int a = 3, b = 5, c;
c = a++ + ++b;
cout << a << << b << " " << c;
```

12. **What will be the output of the following code?**

```
int x = 4 y = 2 z;
z = x++ * --y + ++x;
cout << x << " " << y << " " << z;
```

13. **Write a program to find the euclidean distance between two coordinates.Take both the coordinates from the user as input.**
14. **Write a program that will tell the number of dogs and chicken are there when the user will provide the value of total heads and legs.**

    For example:

    Input: heads -> 4 legs -> 12

    Output: dogs -> 2 chicken -> 2
15. **Write a program to find the sum of squares of first n natural numbers where n will be provided by the user.**
16. **Given 2 fractions, find the sum of those 2 fractions.Take the numerator and denominator values of the fractions from the user.**
17. **What will be the output of the following code?**

```
#include <iostream>
using namespace std;

int main() {
    int a = 20, b = 6, c = 4;
    cout << a % b + c % a;
    return 0;
}
```

18. **What will be the output of the following code?**

```
#include <iostream>
using namespace std;

int main() {
    int a = 5, b = 10, c = 15;
    bool result = a < b && b < c || c == 10;
    cout << result;
    return 0;
}
```

19. What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;

int main() {
    int a = 10;
    int b = 5;
    int c = a += b -= 2;
    cout << a << " " << b << " " << c;
    return 0;
}
```

20. What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;

int main() {
    int x = 5, y = 3;
    cout << (x & y) << " " << (x && y);
    return 0;
}
```

21. What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;

int main() {
    int a = 6, b = 3;
    a += b *= 2;
    cout << a << " " << b;
    return 0;
}
```

22. What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;

int main() {
    int x = 0, y = 10;
    bool result = (x != 0) && (y / x > 2);
    cout << result;
    return 0;
}
```

Note: - Write Solution on the same folder as instructed in class and make sure to push the solution in github repo which has been created in first class and submit the repo link on your dashboard as instructed in the class