

C++ String (Lecture Activities)

Group Works

Exercise 1 (5 min)

Write a program that do the following

1. Reads two strings, **s1** and **s2**.
2. Creates a new string of their concatenation using **+** operator or **+=**.
3. Prints the new string.

```
#include <iostream>
#include <string>
using namespace std;
int main( ){
    // Declare string variables
    string s1, s2, s3;
    // Read string variables
    cin>>s1>>s2;
    // concatenate two strings (s1, s2) and save it in another
string variable s3
    s3 = s1+ s2;
    // print s3
    cout<<s3;
    return 0;
}
```

Exercise 2 (10 min)

Write a program that do the following

1. Creates a string, **s1**.
2. Initializes **s1** with "Hyper Text Markup Language"
3. Creates a new string of the first letter of each word using the subscript operator, [**int**] (see slide 17).
4. Prints the new string. Note that the output should be "HTML"

```
#include <iostream>
#include <string>
using namespace std;
int main( ){
    // Declare string variables
    string s1= "Hyper Text Markup Language" , s2="", s3;
    // get the first character in s1
    s2=s1[0];
    // get the fifth character in s1 and add it to s2
    s2 +=s1[6];
}
```

```

// get the tenth character in s1 and add it to s2
s2 +=s1[11];
// get the seventeenth character in s1 and add it to s2
s2 +=s1[18];
// set s3 value to the s2 value
s3 = s2;
// print s3
cout<<s3;
return 0;
}

```

Exercise 3 (20 min)

Write a program that do the following

1. Creates a string, **s1**.
2. Initializes **s1** with “Hyper Text Markup Language”
3. Replaces “Language” in **s1** with “Prog. Lang.” using **find**, **substr** and **length** functions (see slides 20 to 25).
4. Prints **s1**.
5. Inserts “(HTML)” to the end of **s1** using **insert** and **length** functions.
6. Prints **s1**.

```

#include <iostream>
#include <string>
using namespace std;
int main( ){
    // Declare a string variable and initialize it
    string s1="Hyper Text Markup Language";
    // Declare an integer variable and initialize it with the
    position of the first letter of Language in s1
    int languagePosition = s1.find("Language");
    // get a substring “Hyper Text Markup” and save it in s1
    s1=s1.substr(0,languagePosition);
    // print s1
    cout<<s1<<endl;
    // add (HTML) to the end of s1
    s1.insert(s1.length(),"(HTML)");
    // Print s1
    cout<<s1;
    return 0;
}

```

Exercise 4 (5 min)

Write a program that do the following

1. Reads a string, **s1**.
2. Check whether s1 is empty. If it is empty, print “Empty” else print “Not empty.” Use empty function and ? operator (see slide 21 and 29).

```

#include <iostream>

```

```
#include <string>
using namespace std;
int main( ){
    // Declare a string variable
    string s1;
    // Read a line of string and save it in s1
    getline(cin,s1);
    // Validate if s1 is empty if yes print "empty" if not print
    "not empty"
    cout<< (s1.empty()? "Empty": "Not Empty");
    return 0;
}
```

Individual Work

Exercise 5 (10 min)

Write a program that reads a string of two word in one line. Then, it displays abbreviation of the two words. An example of the program output is shown below.

Enter a string of two words: **Face Book**
The abbreviation of Face Book is (FB)