Compiler Construction  
(BSCS – 601)

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**Lab Assignment**

**SURB Language**

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Keywords: (Same as C#)

* ret (return)
* class
* new
* print
* static
* interface
* abstract
* this
* break/continue
* closed //closed represents sealed
* virtual
* Override

Data Types:

* char

RE=”^’[.]{1,2}’$”

* Int

RE= ”^-?[0-9]{1,16}$”

* str (string)

RE=”^\”[\\s\\w.]\*\”$”

* bool

RE = “^(true|false)$”

* double

RE = “^-?[0-9]+(.[0-9]+)?(e)?(-)([0-9]+)?$”

Data Structure:

* Array
* ArrayList

Loops:

* for : initialization ; condition ; Increment/Decrement : (body)
* foreach : object [var] in collection : (body)
* while : condition : (body)

Syntax:

for: int i =0, i < 3, i++:

(

Console.Write(“Hello ”);

Console.WriteLine(“World”);

)

Operators: (Same as C#)

* Arithmetic Operators: +, -, \*, /, %
* PM : +, -
* PMD : \*, / , %
* Relational Operators: <, >, <=, >=, ==, !=
* Logical Operators: &&, ||
* Unary Operator : !
* Assignment Operators: =, +=, -=, /=, %=
* Increment/Decrement Operators: ++, --

Conditions:

* if : condition : (body)
* else : (body)
* elif : condition : (body)

//elif is for else if

Access Modifiers: (Same as C#)

* public
* private
* protected

Functions:

* data type : parameters : (statement)

Syntax:

// no Paramter

Int Increase:

(

num = num + 1;

return num;

)

// Multiply Paramter

Int Area: int width, int height:

(

int area = width \* height;

Return area;

)

* void : parameters : (statement;)

Syntax:

void Display:

(

Console.WriteLine(“Hello World”);

)

OOP Concepts:

* Inheritance represents as colon ( : )
* Interface represents as colon ( : ) or comma ( , ) if there is any inheritance( like C#)
* VO: override and virtual

Terminator (End of Line):

* Semicolon (;)