COURSE HANDOUT

Course Code	ACSC13
Course Name	Design and Analysis of Algorithms
Class / Semester	IV SEM
Section	A-SECTION
Name of the Department	CSE-CYBER SECURITY
Employee ID	IARE11023
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Topic Covered	Pseudo code for expressing algorithms
Course Outcome/s	Use pseudocode for writing algorithms to solve the problems
Handout Number	2
Date	23 March, 2023

Content about topic covered : Pseudocode for Expressing an Algorithm

Pseudocode for expressing an algorithm?

The following are used in pseudocode for expressing an algorithm

- 1. Comments are defined for representing the title an algorithm or usage of the statements In some programming languages, symbols // or /* */ are used for denoting the comments
- The compound statement (i.e. collection of statements) is represented as a block. If , for loop, while loop are generally represented as blocks. Main program is also represented as blocks. Everly block is represented with { and } braces.

Ex: for(i=0;i<=10;i++)

{

}

- 3. Identifiers should beginning with letter and followed by either digits or letters
- 4. Use data types for representing the variables and also constants
- 5. Expressions and assignment statements are used for computations Ex: c=a+b
- 6. Boolean (i.e True or False) values and logical operators (AND, OR, NOT) are used for validation of expression in the control and conditional statements
- 7. If statements, case statement, while statement, and for loop statement are used in pseudocode for expressing conditional and control statements in an algorithms

```
The "conditional statement" is constructed as follows
```

```
If <condition> then<statement>
If <condition> then<statement>
If <condition> then<statement -1>
Else If < statement -2>
```

```
The "case" statement is constructed as follows
case
{
 :< condition1> : <stmt - 1>
 :< condition1> : <stmt - 2>
 |
 |
 :< condition n > : <stmt - n>
 : else: <stmt n+1>
}
```

If condition -1 is false, then condition-2 is evaluated. Statement is exit and so on upto 'n' If none of the above conditions are true i.e., condition n+1 is executed and exit from the case statement.

```
The "while loop" takes the following form while <condition >
While (condition)
```

```
<Statement 1>
<Statement 2>
|
|
|
< Statement n>
```

}

{

As long as condition is true the statements get except at when a condition become false the loop is exit and the value of condition is evaluated at the top of the loop.

The for loop takes the following form

```
for variable := value 1 to value 2 step do
{

<pre
```