20/9/23

PSPP

Syllabus

UNIT - I

Computational Thinking and Problem Solving

* Fundamentals of Computing - Identification of computational Problem
- Algorithms, building blocks of algorithms (statements, state, control flow, function)
- Notation (Pseudo code, flow chart, Programming language), algorithmic problem solving, simple strategies for developing algorithms (iteration, recursion). Illustrative problem : finding minimum in a list, insert a card in a list of sorted cards, guess an Integer number in a range, Towers of Hanoi.

1. What is a computer ?

Computer is an electronic device, which accepts data (input) process it and produce the desired output (information).

2. Data → Raw Information (Input), Unprocessed data.

3. Information → Processed data. (that is output).

4. Computer system = Hardware + Software

* Assembly lang - mnemonic codes (Special meaning Codes)

Generation	Period	Devices
First	1940 - 1956 (Machine language)	Vacuum Tubes [ENIAC, EDVAC, UNIVAC - I]
Second (Operating System) (Batch Processing)	1956 - 1964 (Machine lang + Assembly lang)	Transistor (Solid state devices) (Punched cards (I)) [IBM 1401, 1620]
Third	1964 - 1971	IC (Integrated circuits) [IBM 360 series, Honeywell 6000 series]
Fourth	1971 - 1980 (High level lang)	M.P (Microprocessor) [IBM & Apple]
Fifth	1980 - ... (High level lang)	Ultra VLSI (Parallel processing)
Sixth	(Natural lang processing)	Parallel & Distributed

PYTHON

1. write a python program to add any two Integers.

```
a = 10
b = 20
c = a + b
print ("Sum = ", c)
```

```
a = input ("Enter a number1")
b = input ("Enter a number2")
c = a + b
print ("Sum =", c)
```

Exchange Two Values

b)
```
a = 10
b = 20
print ("Value Before a", a)
print ("Value Before b", b)
a = 20
b = 10
Print ("a", a)
print ("b", b)
```

1)
```
a = 10
b = 20
c = a
a = b
b = c
print (a)
print (b)
```

2)
```
a, b = b, a
```