1. Overview of programming concepts, types

Programming concepts mainly focuses on Data types,

Control statements, Functions & methods, object-oriented concepts, algorithms, error handling etc.

Which helps programmers to interact with computers.

1. The importance of programming technology.

Programming technologies are way of communication between humans and machines because machines know only binary data, we use programs which is converted to binary further so machine can understand.

1. Difference between compiled and interpreted

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| Compiled | Interpreter |
| Converts entire code into machine readable code before execution. | Converts code line by line at runtime. |
| Generates executable binary file. | Interprets directly. |
| Speed is fast because already binary code generated. | Speed is low because of line by line interprets. |
| Errors will be detected during compile time. | Errors will be detected during runtime. |
| Ex. C, C++, Java | Ex. Python, Node |

4.Basic syntax and structure of each language (C, C++, java, Python)

C: -

#include<stdio.h> //header file

Void main () // main function

{

Printf(“PeopleTech”); //print statement

}

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C++: -

#include<iostream.h> //header file

Using namespace std;

Void main() // main function

{

cout<< “PeopleTech”<<endl; //print statement

}

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Java: -

import java.util.\*

class test{

public static void main (String[] args)

{

System.out.println(“PeopleTech”);

}

}

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Python:-

print(“PeopleTech”);

4. Procedure oriented vs Object oriented

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| --- | --- |
| Procedure oriented | Object oriented |
| Procedure oriented follows top- down approach of programming | Object oriented follows bottom-up approach of programming |
| Functions are used for code reusability. | It supports some features like polymorphism, inheritance, abstraction, and encapsulation. |
| Best use when problems are small | Best to use when problems are big. |