Assignments

Write on 5 paradigms of programing

Answers:

A programming paradigm is a way or style of programing – a general approach to solving problems with code. It represents a set of principles and practices that define how a program is structured and executed.

1. Object oriented paradigm [oop];

* How it works; organises code into “object” which represent real world things, with data [attributes] and behaviors [methods].
* Examples; think of a “car” object with properties like color and speed, and methods like drive.
* Languages; java, c++, python, CH.

1. Imperative paradigm

* How it works; you tell the computer how to do something, step by step.
* Example; like giving cooking instructions –do this, then that.
* Languages; c, python, java.

1. Functional paradigm

* How it works; focuses on functions and avoids changing data [no variables being updated].
* Example; more like math –input goes in, output comes out, no side effects.
* Languages; Haskell, lisp, parts of python, javascript.

1. Logic paradigm

* How it works; you define facts and rules, and the program figures out the answer by reasoning.
* Examples; like solving a puzzle or using a detective”s clue.
* Languages; prolog.

1. Declarative paradigm

* How it works; you tell the computer what you want, not how to do it.
* Examples; like asking a search engine a question instead of writing a whole algorithm.
* Languages; SQL, HTML [in a sense], prolog.