**PART 1**

Programming paradigms are a way to classify programming languages according to the style of computer programming

Programming paradigms  are a way to classify programming languages according to the style of computer programming.There are the various types of programming paradigms.We will describe the imperative and declarative paradigm.

The imperative paradigm, is also known as the procedural paradigm.The imperative paradigm defines the programming process to be the development of a sequence of commands that, when followed, manipulate data to produce the desired result. Procedural programming could be considered a step towards declarative programming. Because, programmer can often tell, simple functions without necessarily looking at the details of how it achieves its result.

The declarative paradigm is the contrast of the imperative paradigm.The declarative paradigm is asks a programmer to describe the problem to be solved rather than an algorithm to be followed.The declarative programming system applies a general problem solving algorithm to solve problems presented to it.

**Imperative Programming Example(Python)**

x=0 #We assing a value to x variable

y=4 #We assing a value to x variable

while x<16: #Repeat the body till x=16 or x>16

print(x) #Print the x value

x=x+y #Assign a new value for x

print(x) #Print the new x value

if x=16: #Check the condition

print(“16 can be divided to ” + str(y)) #If the condition is true print a message

else: #If the condition is false

print(“16 can’t be divided to ” + str(y)) #Print a message

**Declarative Programming Example(Prolog)**

likes(celal, pizza) #Defining the celal likes pizza

likes(celal, spaghetti) #Defining the celal likes spaghetti

dislikes(celal, spinach) #Defining the celal dislikes spinach

likes(emre, pizza) #Defining the emre likes pizza

likes(emre,spinach) #Defining the emre likes spinach

likes(emre, spaghetti) #Defining the emre likes spaghetti

dislikes(tugba, pizza) #Defining the tugba dislikes pizza

dislikes(tugba, spaghetti) #Defining the tugba dislikes spaghetti

likes(tugba, spinach) #Defining the tugba likes spinach

compatible(X,Y) :- likes(X,Z), likes(Y,Z) #Define a rule for compatible members

incompatible(X,Y,Z) :- dislikes(X,Z), likes(Y,Z). #Define a rule for incompatible members

incompatible(X,Y,Z) :- likes(X,Z), dislikes(Y,Z). #Define a rule for incompatible members

**PART 2**

Prolog is a declarative programming language.Because you don’t write out the computer should do line by line. The program logic is expressed in terms of relations, represented as facts and rules.

**PART 3**

Python is a imperative programming language.Because you write the algorithm step by step and all steps mus’t be detailed.When the steps followed, python will produce the desired result.