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Assignment type -Python

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In [ ]: """Q1. What is Abstraction in OOps? Explain with an example.  
Ans 1 Abstraction is the process of hiding the internal details of an application from the outer world. Abstraction is used to de  
in simple terms. It's used to create a boundary between the application and  
the client programs
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car is a great example of abstraction. we can start a car by turning the key  
or pressing the start button. we don't need to know how the engine is  
getting started, what all components in our car . The car internal  
implementation and complex logic is completely hidden from the user."""
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In [ ]: """  
Que 2 -Q2. Differentiate between Abstraction and Encapsulation.  
Explain with an example.  
  
Ans 2-  
  
Abstraction-  
a) abstraction solve the problem in the design level  
  
b)abstraction is used for the hiding the unwanted data and giving relevent data  
  
c)abstraction lets you focus on what the object does instead of how it does it  
  
Encapsulation  
  
a) Encapsulation solve the problem in the implementation level  
  
b) Encapsulation means hiding the code and data into a single unit to protect  
the data from the outside world  
  
c) Encapsulation means hiding the internal detail or mechanism of how an object  
does something  
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In [ ]: """  
Que 3. What is abc module in python? Why is it used?  
  
Ans-The 'abc' module in Python library provides the infrastructure for defining custom abstract base classes.  
'abc' works by marking methods of the base class as abstract. This is done  
by @absttractmethod decorator  
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In [ ]: """  
Que 4-How can we achieve data abstraction?  
  
Ans 4-Data Abstraction in Python can be achieved through creating abstract  
classes and inheriting them later.  
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In [ ]: """  
Que 5 Can we create an instance of an abstract class? Explain your answer.  
Ans 5-  
Abstract classes cannot be instantiated, but they can be subclassed. When  
an abstract class is subclassed, the subclass usually provides implementations  
for all of the abstract methods in its parent class. However, if it does not,  
then the subclass must also be declared abstract  
"""
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