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Name of Course	**OBJECT ORIENTED PROGRAMMING**
Course Code	**SECJ2154-15**
Lecturer	**Dr. Nur Syahela binti Hussien**
Year	**2021**
Distribution Date / Due Date	**Week 11 / Week 15 (22 June 2021)**
Assessment	Group Project (3-4 members)

PURPOSE: Students should be able to write Java application using object oriented approach such as to implement class, methods, control structures (i.e. repetition and selection), arrays, String and other appropriate techniques in Java application.

QUESTION 1.

The KidZania KL is a safe and clean indoor playground located at a famous mall in Kuala Lumpur. Design a set of classes that work together to calculate total charges for customers who send their kids to the KidZania. You program should have an abstract class to describe the kids. The class should also have an appropriate data fields. A constructor must be provided to initialize all the data fields. This class also has a toString method to display the fields. The parent or guardian who sent their kids to KidZania will get an ID card and for this, he/she must pay an amount as a deposit to KidZania. RM20 will be deducted from the deposit for the loss of card. Thus, to capture the deposit returned to them, an abstract method must exist in this class. Besides, create a class that extends the above abstract class. This child class declares one final double field named DEPOSIT with RM50 as the value. This field holds the amount of deposit that must be paid by the parent/guardian. The class should also declare another finalfield to hold RM20 fine that is charged to the parent/guardian if he/she lost the ID card. Next,the class will override the abstract method defined in it super class. In this method, you shouldcalculate the balance of deposit if parent/guardian is charged for the loss of card. Also, override the toString method defined in the super class with appropriate statement. Besides the two classes, create a class to formulate the KidZania charges in hourly basis. This class extendthe second class. You should provide an appropriate data fields, constructor, mutator and accessor methods for this class. The detail to calculate the playground charges is shown below:

Duration	Rate
First Hour	RM20
1 - 2 hours	RM25
2 - 3 hours	RM35
3 Hours and above	RM100

INSTRUCTION

Answer the following questions based on the user requirements, KidZania, as given above:

1. Design a UML Class diagram of KidZania the indoor playground at a famous mall in KL.

2. Based on your solution, the UML class diagram in Question_1 above, write a Java Program to demonstrate all the classes.