

Hi Nirmal,

Would you please solve the follow challenges:

1. Use UML to model and Java to program the following requirement: The Tiny-Fancy-Rubber-Duck company sells rubber ducks.
 1. They can come in different sizes: XLarge, Large, Medium, Small or XSmall.
 2. They can be green, yellow, black, red, or white.
 3. The red and green ducks that come in the large size can swing and walk
 4. The Small and Xsmall yellow ducks can only swing
 5. Any other model can swing and fly.
 6. If the duck can fly, it gets a set of 3 electric engines.
 7. If the duck can walk, it gets a set of only one electric engine.
 8. If the duck only swings, it is just a wind-up toy with no engine of any type. X
2. Program using Java and use one or more design patterns to solve the following problem: Going back to the The Tiny-Fancy-Rubber-Duck factory. Now we need to sell them. The factory delivery service gets and deliver orders under the following rules
 1. None of the delivery employees knows what the concrete type of duck is that they are carrying or the type of package.
 2. If the order needs to be sent across the sea, then the package is made of plastic.
 3. If the order needs to be sent in a flight, then the package is made of wood
 4. If the order needs to be sent by car, then the package is made of paper.
 5. The size of the package is defined by the size of the duck.
 6. Every day the delivery supervisor gets a list of orders and prepares the packages based on the order description which includes the address and type of duck.
3. Model the following requirements using microservices and suggest technologies: The Tiny-Fancy-Rubber-Duck factory is expanding. They have asked you to provide a solution that meet the following requirements
 1. They need a mobile and desktop access.
 2. They need to send notifications each time a new order is created or arrives to the destiny
 3. They need to register employees and customers
 4. They need to control the ducks production
 5. They need to get orders from customers.

For prompt 1 and 2 you have to send the java project and for 3 it is enough an image with a diagram. Also for 1 send an image with the uml diagram.

You have until Monday end of your day to send the answers. Reply to this email.