Question 1

Polymorphism

As an example, to polymorphism, we can get a sicario like this, if someone give us a cake and say to cut that cake, we need to use a knife to that. If someone give us a piece of paper rather that cake, we need to use a scissor to cut that paper. So that mean cut can be implement in different ways according to the situation.

Inheritance

As an example, to the inheritance, we can get animals as the parent class because then we can inherit common properties such as name, color, sound and many more. From animal parent class we can make many child classes according to our preferences as dog, cat, tiger etc.

Encapsulation

As an example, to the encapsulation, we can get the medical capsule. In a medical capsule there are several categories of medicines can all that medicines are stored in that capsule as a one unit.

Abstraction

As an example, to the abstraction, we can get a mobile phone. In a mobile phone there have different types of complex applications, and we can get many services through them. But the users of the mobile phone do not know the inside process of the phone. That means implementation is hidden from the users.

Question 2

A software life cycle model is a diagrammatic representation of the software life cycle. It represents all the methods that need to make a software from beginning to the end.

requirement analysis

This is the first stage of the SDLC and in this stage we need to collect the requirements from all stakeholders and then we need to analyze the collected requirement with aim of finding redundant requirements, inconsistence requirements and at the end of this parse we must have successfully written set of requirements.

Design

Architects and Designers craft a high-level and low-level design of the software in this phase those are,

• Architectural Design

• Low level Design

Decisions are made about hardware, software, and the system architecture also made in this phrase.

Development

On receiving system design documents, the work is divided in modules. A set of developers code the software as per the established design specification, using a chosen programming language in this phrase.

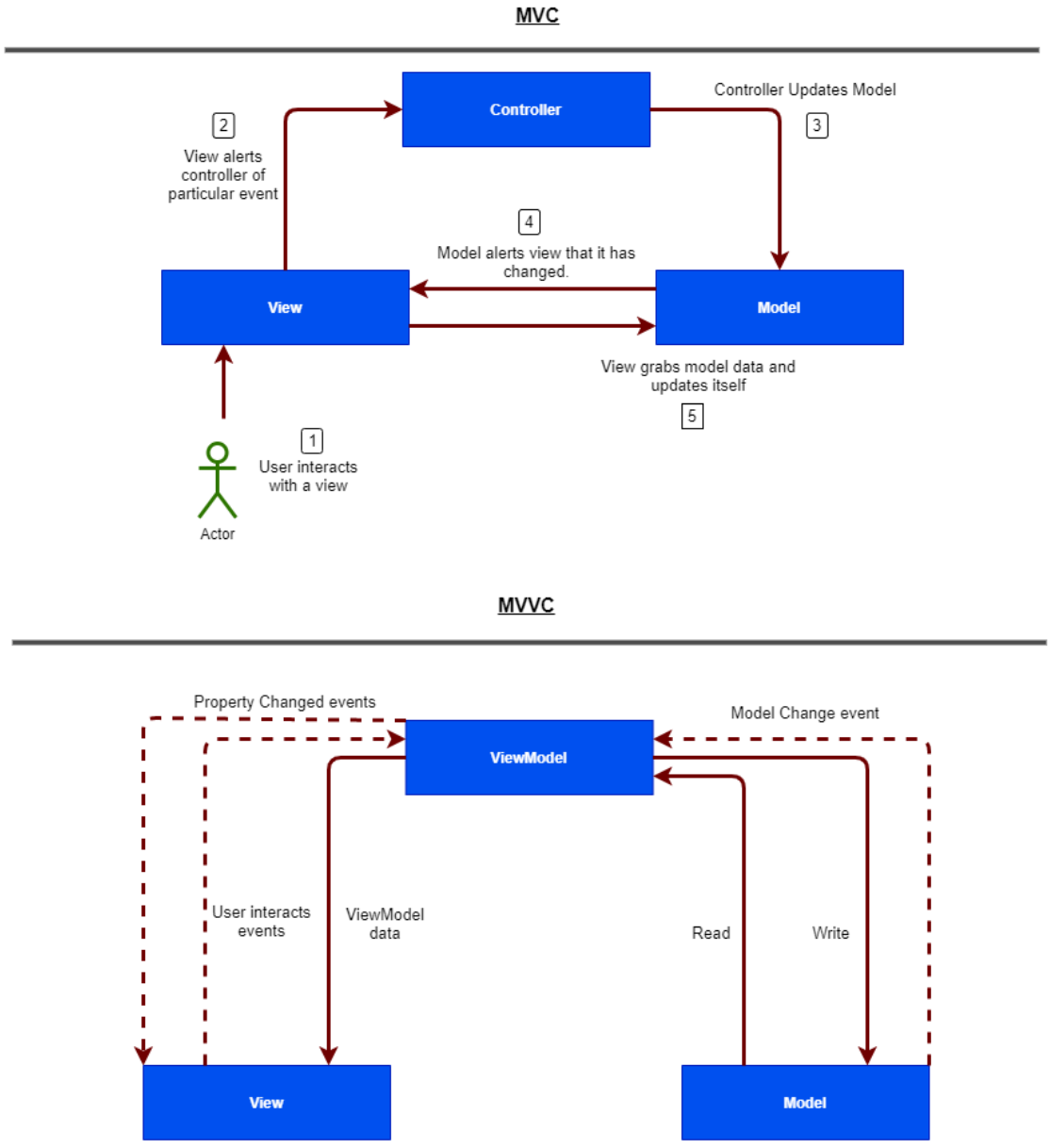
Testing

The testing phase ensures that the software requirements are in place and that the software works as expected.

Maintenance

Once the software is error free, it is deployed into the operating environment. While the customers are using the software, any issues will be brought to the attention of the maintenance team.

Question 4



Question 5

A data flow diagram shows the way information flows through a process or system. It includes data inputs and outputs, data stores, and subprocesses that moves data inside the system.