1. Question 01

Message Oriented Middleware supports communication between distributed systems. MOM do asynchronous messaging using queuing. In this mechanism, client sends messages to the queue and those messages are remaining there until server retrieve those messages. MOMs helps to develop sophisticated mobile applications. There are many reasons for that. In this asynchronous communication can do disconnection operation. As server not need to available always when client send messages. As an example application can send messages to another application and receive answers later. One of main advantage is, if there is a system failure but messages can be recover as messages are in the queue and not lost. Accordingly, asynchronous communication can provide a vital service to the today’s software systems.

1. Question 02

Java support native methods that written in c++, Java Native Interface enables developers to write methods to handle situations when an application cannot be written in entirely in the Java language.

1. Question 03

Sun Microsystem company developed Java in 1995. After that Microsoft saw the potential language and then attempt to start that strategy. Because of that, Microsoft developed JVM with IE3, and then started enhancing it beyond the Java standard. But in 1997 Sun sued Microsoft to incompletely implementing Java 1.1 standard. That forced Microsoft to discontinue the implementations by Sun. Then Microsoft decided to stop contribution for the Sun and thought a significant to their company. As a result, C# was developed by Microsoft as a rival to Java. The Sun Microsystems did not allow to make changes and developer further to Java. So Microsoft developed their own language.

1. Question 04

When comes to dispatcher’s role, it first takes each and every event that come to it. This dispatcher is responsible to for process a stream of input events. So, the event loop iterates through all events in the event queue, and pushes them in order to the appropriate component within an application. If analyzed more specifically, dispatcher analyzed the event and determine the type of the event. After that, send each and every event to the handler that can handle events of the type.

Such systems have event queues, because they do asynchronous communication. An event queue makes corresponding active objects to response to particular events. So if a particular server is not available, when that available that can response to the message due to this event queue. Because the thing these systems use an event queue for the communication.

1. Question 05

a)

Receipt printer class

The responsibility of this class is, on the request by the customer panel the deposit item receiver initiates printing of the receipt on the printer. Receipt printer class is an interface which has the print () method. The receipt printer calls to the print method. This is the interface with the physical object printer.

b)

An abstract type is a type in a nominative type system that cannot be initiated directly. We cannot create objects from this type. Abstract type hasn’t implementation or provide an incomplete implementation. This deposit item has three sub types such as can, bottle, crate. The deposit item type is common for these three types.

1. Question 06

a)

HTML

When comes to role of HTML, whole designing parts of all pages are done by using HTML. If analysed more specifically, HTML is the code that translate the design into what your browser can display. In this particular website, mainly register page, login page, home page and gallery. The main skeleton of these pages will design using HTML codes. The main components of pages such as text fields, buttons and texts will be design using the HTML.

CSS

CSS allows to develop the overall look of the website. When HTML design the content of the web page CSS will helps to develop the layouts, font and colors in the website. In this website, there a gallery to view photos. So, CSS codes will helps to design the page more colorfully. Not only that, it will help to develop the design of other pages also. In the requirements, clearly mentioned that the website should be more attract full compared to other websites of furniture shop. So, CSS style sheets will justified that using colorful layouts and pages.

PHP

PHP is a server-side scripting language, which means the client only receives the output. Since the processing happens in the server. The processing is done by using the resources of the server before sending the output. PHP make static HTML pages to dynamic. In this website there will be a database to store user details. So the website owner can keep all details about every user who registered to the website. This website has an online gallery and users can upload images to the website. So, PHP codes can be used to upload images to the database and afterwards retrieve the images from the database to slide show. So other than the user details the database will store images and their details in the database. Accordingly, PHP can use to make the connection between website and the database to transfer relevant data among them.

JavaScript

A page with HTML code is a static one and without JavaScript it would be static still. JavaScript helps easy navigation of the website and help designers to guide the users with additional information to guide them through walkthrough. In this website, mainly has a user registration page to register. So, JavaScript codes will help to validate registration details entered by the user. Because website owner also able to store accurate user details in the database. After the validation section JavaScript can be used to apply special effects to the website. This website has a slide show, and JavaScript codes can be applying to add special effects to that. Not only that, JavaScript can be used to design important messages warnings to the website that makes direction to the website users. So, in this way, JavaScript will help to develop the website as a dynamic one.

b)

Cookies

Cookies are small files which are stored on a user’s computer. They are designed to hold a modest amount of data specific to particular client and website, and can be accessed either by the web server or the client computer. This allows server or the client computer. This allows server to deliver a page tailored to a particular user, or the page itself can certain some script which is aware of the data in the cookie and so is able to carry information from one visit to the website to the next. In this website, cookies can be used to store information about users. So, website will be able to track details of each and every user. Because of that, when a user is revisited the website server will read the cookie to find the username and then retrieve all necessary information from database. Cookies will be helped to both users and website to make website more user friendly and accurate.

IP address

When user access to the internet, every user is identified using their IP address. When a user visiting a website the user’s IP address is automatically sent to a third party. In this website owner clearly mentioned that, only people living locally should be allow to participate for the competition. So that can be track using the IP address of user. That will categorize both local and foreign users. Not only that, these IP addresses will help to track each and every user in the website. That will ensure the website security also.

Password

Passwords ensure the data security and online identity of user. Most of the time, passwords use in the internet to protect the data from unauthorized accesses. If there is no password protection, everyone can access to the data. In this website, users have user accounts, so passwords will help to protect the personal details whish are contained in the user accounts.