University of Bedfordshire
Faculty of Creative Arts, Technologies and Science
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Comparative Integrated Systems

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Question 1

When java was becoming one of the most popular programming languages, Microsoft decided to develop their own programming language to introduced their products. As a results C# was invented by Microsoft as a strategic commercial decision. C# is a general-purpose, object-oriented programming language. Mostly C# is used to develop web applications, desktop applications and even mobile applications. In addition, it is used to develop games. Also, it is high level programming language. Main purpose of developing C# was to beat JAVA and make their own language and it proves that they have successfully achieved their target because of above mentioned uses of C#. Therefore, it is a successful strategic, commercial decision.

Question 2

RFC – Request for Comments

Example- RFC 7541 – HTTP/2

Question 3

Interoperability is defined as the ability to exchange and process data from system to another system. JSON is a data interchange format which means it is used to exchange data from one application to another application. therefore, JSON is used to linked data.

Example –

Question 4

In this case, Cloud vision API by Google can be used. The pricing models depend on the purpose and what kind of features that require for this system. Since, this application is used to analyses pictures of vehicles and returns the most likely make and model of the car, there should be a logo detection feature to detect the model of the car, an object localization feature to extract the car among the other

objects in the picture. There can be more features therefore the exact price can not be estimated till the all the required features are identified. Nevertheless all of these features are free for first 1000 unites and from 1001 unites we have to pay the price but it depends on the number of features we are going to add to the system.

Question 5

Event driven programming is a programming method which events are used to decide the flow of the execution of the program.

GUI and embedded systems naturally create events such as when a user a press a button to input data it is an event and that occurs because of GUI. in addition, sensor detection, mouse click, key press can consider as another examples. furthermore, nowadays all embedded systems and computers are based on event driven methods therefore GUI and Embedded systems can be defined as most accurate application areas for event driven programming.

Question 6

Encapsulation use to wrap up data in single unite and hide them from other classes. Methods are used to access those data. In receipt printer class, all variables are invisible. That mean those are private variables. Getters and setters use to execute those hidden/private variables. Therefore, the Receipt printer class is encapsulated. Because of this testing is easy and it also reduces the complexity. Furthermore because of this control access method it also ensures the security.

Question 7

HTML

The HTML is used to develop the front-end of the website. This contain the basic structure of the web site. And all the features should be visible to naked eye hence it would be a use-friendly website. In order to create user register page, a platform

to upload pictures and another platform to display the pictures, HTML will be used.

CSS

CSS is used to develop the graphical view of the website. In this web site they are going to show pictures of cats and this web site will be used by various users from various age groups. Therefore, selecting the most suitable font colour and style, back ground images, design the platform to display the uploaded images by users will be coded using CSS

JavaScript

JavaScript has ability to react to user's actions accordingly. JavaScript is used validate the data and make the webpage responsive. In addition, JavaScript can be used to develop the slide show of the ten most beautiful cats in the given web site.

PHP

PHP is a scripting language which is used to code back-end of the website. This is used to store the images on the database and retrieve them. to handle the user votes and manage the rating for the top ten most beautiful cats.

Cookies

Cookies are used to defect and save login information of users for future use. In this website email of the user and password and other user details. In addition, cookies can be used to advertise the webpage for users with same interests.

IP Address

Internet Protocol Address (IP Address) is used to identify the location of the website by giving a unique ID. through the domain name, it communicates with DNS server to find the location of the server where the web site is hosted. Furthermore, this is also help to detect the users' geographical information since this competition is only for people who live in Dehiwala area.

Passwords

Since there are user accounts, passwords should be used to prevent unauthorized access, alter user information, alter pictures and other details. This makes this web site as a secured web site.