MSE ASSIGNMENT

BSB MOUNICA

1PI10IS022

**Q1> Explore the DVM instructions and prepare a summary of the same atleast for 5 instructions in a detailed format**

**ANS1) DALVIK INSTRUCTIONS**

1. **Name**- Move Instruction

**Explanation**-Moves the content of a into b. Both registers must be in the first 256

register range.

**Syntax**- move a, b

1. **Name**- Array-length Instruction

**Explanation**- Calculates the number of elements of the array referenced by b and puts the length value into a.

**Syntax**- array-length a, b

1. **Name**- Throw Instruction

**Explanation**- Throws an exception object. The reference of the exception object is in a.

**Syntax**- throw a

1. **Name**- add-long Instruction

**Explanation**- Adds b to c and puts the result into a

**Syntax**- add-long a, b, c

1. **Name**- and-long Instruction

**Explanation**- Calculates the b AND c and puts the result into a.

**Syntax-** and-long a, b, c

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**Q2> Differentiate between mobile and cloud computing**

**ANS2)**

* **Mobile computing i**s human–computer interaction by which a computer is expected to be transported during normal usage. Mobile computing involves
* Mobile communication- Communication issues include ad hoc and infrastructure networks as well as communication properties, protocols, data formats and concrete technologies
* Mobile hardware- Hardware includes mobile devices or device components.
* Mobile software -Mobile software deals with the characteristics and requirements of mobile applications.
* Mobile Computing- is when a (work) process is moved from a normal fixed position to a more dynamic position. Can also be defined aswhen a work process is carried out somewhere where it was not previously possible.
* Challenges: Disconnection low bandwidth ,high bandwidth variability , low power and resources, security risks ,wide variety terminals and devices with different capabilities, fit more functionality into single, smaller device.
* **Cloud computing**, allows you to store your files and folders in a “cloud” area on the Internet, allowing you access to all of your files and folders wherever you are in the world – but you do need a physical device with Internet access to access it.
* It isn’t that much better. As you can have all your files synchronised between devices so wherever you go, you’ll always have access to your files, but the technology doesn’t fully exist yet.
* Complicated: It’s slow and temperamental, difficult to use and often the average user gets confused as to where the files are actually stored and/or where else they are stored.
* Need for a device: Even though you don’t need to carry round a laptop with you, you still need some physical device to access your service which almost defeats the point anyway. Having everything in your very own secure cloud so you can access anything anywhere is put back by the fact you have to find a computer to use anyway.

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**Q3> Give an example of an application simulating an environment of  context aware computing and justify.**

**ANS3)**

**Eg: Interactive Smart Home Simulator** (ISS)

* Context awareness is the most important research area in ubiquitous computing. In particular, for smart home, context awareness attempts to bring the best services to the home habitants.
* The implementation in the real environment is not easy and takes a long time from building the scratch. Thus, to support the implementation in the real smart home, it is necessary to demonstrate that thing can be done in the simulator in which context information can be created by virtual sensors instead of physical sensors.
* ISS, an Interactive Smart home Simulator system aims at controlling and simulating the behaviour of an intelligent house. The developed system aims to provide architects, designers a simulation and useful tool for understanding the interaction between environment, people and the impact of embedded and pervasive technology on in daily life.
* Here the smart house is considered as an environment made up of independent and distributed devices interacting to support user’s goals and tasks. Therefore, by using ISS, the developer can realize the relationship among virtual home space, surrounded environment, use and home appliances.

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