1>

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| --- | --- | --- | --- |
| **Opcode (hex)** | **Opcode name** | **Explanation** | **Example** |
| 00 | Nop | No operation | 0000 - nop |
| 01 | move vx,vy | Moves the content of vy into vx. Both registers must be in the first 256 register range. | 0110 - move v0, v1 Moves v1 into v0. |
| 0A | move-result vx | Move the result value of the previous method invocation into vx. | 0A00 - move-result v0 Move the return value of a previous method invocation into v0. |
| 0B | move-result-wide vx | Move the long/double result value of the previous method invocation into vx,vx+1. | 0B02 - move-result-wide v2 Move the long/double result value of the previous method invocation into v2,v3. |
| 0C | move-result-object vx | Move the result object reference of the previous method invocation into vx. | 0C00 - move-result-object v0 |
| 0E | return-void | Return without a return value | 0E00 - return-void |

2>

Mobile computing :-

It is taking a physical device with you. This could be a laptop or a mobile phone or some device which enables you to telework – working wherever you go because of the small size of the device you’re using. Either way, there will be some drawbacks. Focusing for the time being on mobile computing – even for non-students it generally means lugging a laptop around with you. You have to open it up, turn it on, plug it in to the mains, get the wireless settings sorted – by the time you’ve done all that faffing around you have to get something else done. For the lucky ones, you can use a Blackberry or a handheld device to work with. Even then the buttons are tiny, and months of living off nothing but sausages, crisps (chips), chocolate and beer, you’ve gained so much wait you mash the keypad with your finger because they’ve become huge and fat.

**Cloud computing** :-

we can have all our files synchronised between devices so wherever we go, we’ll always have access to our files, but the technology doesn’t fully exist yet. It’s getting there, but 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. 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.

3>

Example of application simulating an environment of context aware computing :-

VantagePoint Development Tool:The solution we are looking for is a software tool (working name VantagePoint) that visualises semantic context information in Web Ontology Language using Jena Semantic Web framework and allows developer to edit context information 2 Context Simulation and Application Development Tool and cause context events through graphical user interface. In addition Vantage- Point offers two common middleware component simulations, as OSGi bundles,Context Monitoring Service (CMS) andSemantic Service Registry (SSR) that can be used to test context-aware and service-oriented applications.VantagePoint acts as a viewer and editor to context information. Developer can construct a scenario, a certain house for example, and view it as ground planor from isometric perspective. VantagePoint makes the abstract semantic context information visible and thus helps to understand semantics and ontologies.

CMS is a common middleware component for context information retrieving. Applications can query context information through it or subscribe as a listener for specific contextual events, such as movement in a room. These contextual events can then be generated with VantagePoint by simply modifyingthe properties of objects in the environment or actually moving things in theview.SSR provides means to request services with context constraints semantically.This means that applications can request a high-level service, for example, from a specific area and a list of most suitable services will be returned. This kind of ordering is based on a service capability hierarchy described in an ontology.Applications can also subscribe for a specific service and be notified dynamically

when matching service is discovered.