

```

        doIt();
    }
}

//Read value and see if it exists
public boolean read(short address) {
    short tag = (short) ( (address & 0xF00) >>> 8);
    short slot = (short) ( (address & 0x0F0) >>> 4);
    short offset = (short) (address & 0x00F);

    if( tag == this.node[slot].getTag() ) {
        if( this.node[slot].getValid() ) {
            System.out.printf( "At that byte there is the value %x (Cache Hit)\n",
                this.node[slot].getData(offset) );
            return true;
        }
        else {
            this.data(address);
            System.out.printf( "At that byte there is the value %x (Cache Miss)\n",
                this.node[slot].getData(offset) );
            return true;
        }
    } else {
        if( !this.node[slot].getValid() ) {
            this.data(address);
            System.out.printf( "At that byte there is the value %x (Cache Miss)\n",
                this.node[slot].getData(offset) );
            return true;
        } else {
            this.data(address);
            System.out.printf( "At that byte there is the value %x (Cache Miss)\n",
                this.node[slot].getData(offset) );
            return true;
        }
    }
}

//Initialize Cache
public void initializeCache() {
    for (short s = 0; s < MAIN_MEMORY; s++) {
        this.memory[s] = (short) (s & 0Xff);
    }

    for (byte b = 0; b < SIZE; b++) {
        this.node[b] = new temp(b);
    }
}

//Setup Data
private void data(int address) {
    short tag = (short) ( (address & 0xF00) >>> 8 );
    short slot = (short) ( (address & 0x0F0) >>> 4 );
    short start = (short) (address & 0xFF0);
    short last = (short) (start + SIZE); short value = 0;
    for( short i = start; i < last; i++ ) {
        this.node[slot].setData( value++, this.memory[i] );
    }
    this.node[slot].setTag(tag);
    this.node[slot].setValid(true);
}
}

```