



UNSW  
SYDNEY

```
PUBLIC CLASS OSXFACTORY {  
    @Override  
    PUBLIC IBUTTON CREATEBUTTON()  
    RETURN NEW BUTTON;  
}  
  
PUBLIC CLASS WINBUTTON {  
    @Override  
    PUBLIC VOID PAINT() {  
        SYSTEM.OUT.PRINTLN("BUTTON");  
    }  
}  
  
PUBLIC CLASS OSXBUTTON {  
    @Override  
    PUBLIC VOID PAINT() {  
        SYSTEM.OUT.PRINTLN("BUTTON");  
    }  
}  
  
PUBLIC CLASS MAIN {  
    PUBLIC-STATIC VOID MAIN(String[] args) {  
        GUIFACTORY FACTORY = new OSXFACTORY();  
        FINAL-STRING APPEARANCE = FACTORY.CREATEBUTTON().PAINT();  
        IF (APPEARANCE.EQUALS("BUTTON"))  
            FACTORY = new WINFACTORY();  
        ELSE IF (APPEARANCE.EQUALS("BUTTON"))  
            FACTORY = new WINFACTORY();  
        ELSE  
            THROW NEW EXCEPTION("Invalid appearance");  
    }  
}
```

## Large Scale Data Processing and Analytics

**World-leaders in developing efficient and effective processing and analysis techniques for large-scale data, especially graph/network data, geo-spatial data, streaming data and uncertain data.**

### Competitive advantage

- Large-scale graph/network data storage and indexing
- Innovative, structure-based query processing over graph/network data
- Expertise in social network analysis
- Ability to query multi-dimensional data
- Ability to process queries over moving objects
- Experience with Computing Order Statistics over Data Streams
- Highly skilled at processing probabilistic queries over uncertain data

### Impact

- More effective models to analyse large-scale data
- More efficient and scalable processing techniques to process large-scale data

### Successful applications

- Spam and fraud detection in E-commerce networks (Alibaba Group)
- Developing Large Scale Distributed Graph Processing Platform (Alibaba Group)
- Anomaly detection in communication networks (HUAWEI)
- Optimal Paths with Multi-sources and Traffic Flows in Road Networks (HUAWEI)
- Taming Uncertainty of Distributed Data (Google)
- Processing of large graphs (ARC Discovery Project 2014, 2015, 2017, 2018)
- Multi-dimensional and spatial data processing (ARC Discovery Project 2012, 2015)

### Capabilities and facilities

- FIP - High-performance GPU accelerated large-scale data processing.

### Our partners

- Google
- Alibaba Group
- HUAWEI

### More Information

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