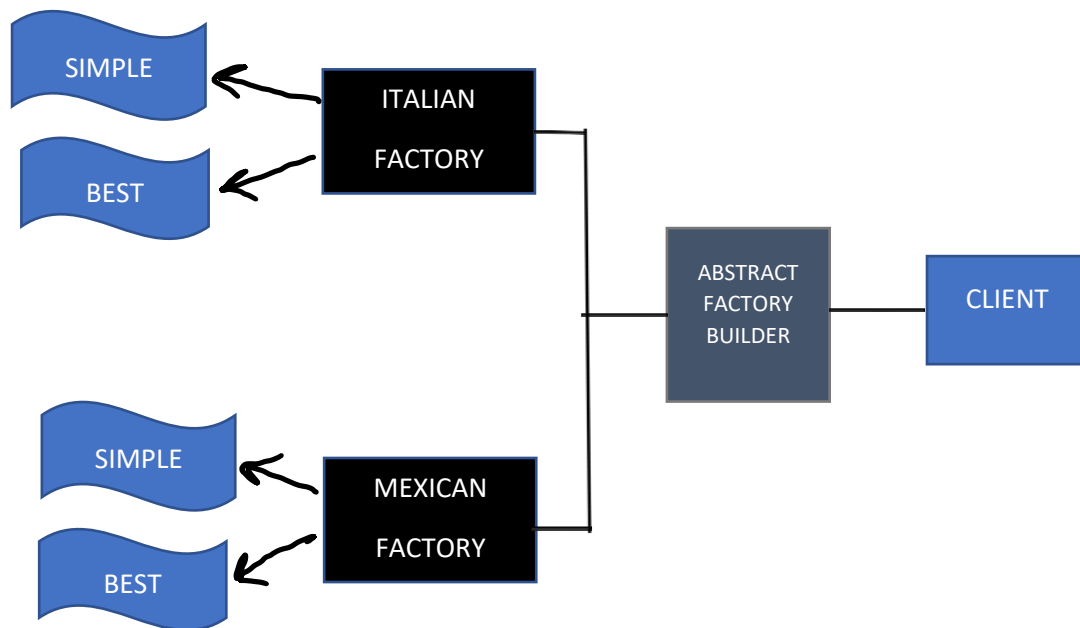


Experiment-4

Aim – Abstract Factory design pattern

Topic – Restaurant

Diagram -



CODE CONTENT –

- there are 3 packages
 - 1) abstracts.factory – Abs_Factory_Builder.java , Food(interface) , FoodType(interface)
 - 2) italian.factory – ItalianFactory.java , SimpleItalian.java , BestItalian.java
 - 3) mexican.factory – MexicanFactory.java , SimpleMexican.java , BestMexican.java
- Client.java

PACKAGE abstaracts.factory

Abs_Factory_builder.java

```
package abstracts.factory;

import italian.factory.ItalianFactory;
import mexican.factory.MexicanFactory;

public class Abs_Factory_builder {

    public static FoodType getFoodType( String str){

        if (str.equalsIgnoreCase("ITALIAN")){
            return new ItalianFactory();
        } else if (str.equalsIgnoreCase("MEXICAN")) {
            return new MexicanFactory();
        }
        return null;
    }
}
```

Food.java

```
package abstracts.factory;

public interface Food {
    public String foodOrdered();
}
```

FoodType.java

```
package abstracts.factory;  
  
public interface FoodType {  
  
    public Food getItalian( String ita);  
  
    public Food getMexican(String mex);  
}
```

PACKAGE italian.factory

ItalianFactory.java

```
package italian.factory;

import abstracts.factory.Food;
import abstracts.factory.FoodType;

public class ItalianFactory implements FoodType {

    @Override
    public Food getItalian(String ita) {
        if (ita == null){
            return null;
        }

        if(ita.equalsIgnoreCase("simple")){
            return new SimpleItalian();
        }

        else if (ita.equalsIgnoreCase("best")){
            return new BestItalian();
        }
        return null;
    }

    @Override
    public Food getMexican(String mex) {
        return null;
    }
}
```

SimpleItalian.java

```
package italian.factory;

import abstracts.factory.Food;

public class SimpleItalian implements Food {

    @Override
    public String foodOrdered() {
        return "YOU have ordered BOTTARGA and PIZZA.....";
    }
}
```

BestItalian.java

```
package italian.factory;
```

```
import abstracts.factory.Food;

public class BestItalian implements Food {

    @Override
    public String foodOrdered() {
        return "YOU have ordered the exotic LASAGNA.....";
    }
}
```

////////////////////////////////////

PACKAGE mexican.factory

MexicanFactory.java

```
package mexican.factory;

import abstracts.factory.Food;
import abstracts.factory.FoodType;
import italian.factory.BestItalian;
import italian.factory.SimpleItalian;

public class MexicanFactory implements FoodType {

    @Override
    public Food getMexican(String mex) {
        if (mex == null){
            return null;
        }

        if(mex.equalsIgnoreCase("simple")){
            return new SimpleMexican();
        }

        else if (mex.equalsIgnoreCase("best")){
            return new BestMexican();
        }
        return null;
    }

    @Override
    public Food getItalian(String ita) {
        return null;
    }
}
```

SimpleMexican.java

```
package mexican.factory;
```

```
import abstracts.factory.Food;

public class SimpleMexican implements Food {
    @Override
    public String foodOrdered() {
        return "YOU have ordered MEXICAN_RICE and CHILS_EN_NOGADA..... ";
    }
}
```

BestMexican.java

```
package mexican.factory;

import abstracts.factory.Food;

public class BestMexican implements Food {
    @Override
    public String foodOrdered() {
        return "YOU have ordered the exotic CHILAQUILES.....";
    }
}
```

```
Client.java
```

```
import abstracts.factory.Abs_Factory_builder;
import abstracts.factory.Food;
import abstracts.factory.FoodType;

public class Client {

    public static void main(String[] args) {

        FoodType f = Abs_Factory_builder.getFoodType("italian");

        //SELECT BEST or SIMPLE food
        Food italian = f.getItalian("best");
        String item = italian.foodOrdered();

        //    //SELECT BEST or SIMPLE food
        //    Food mexican = f.getMexican("simple");
        //    String item = mexican.foodOrdered();

        System.out.println(item);
    }
}
```

```
}  
}
```

OUTPUT –

YOU have ordered the exotic LASAGNA.....