**Visitor Pattern Example: Liquor**

**Interface: Visitable**

**package** liquor;

**interface** Visitable {

**public** **double** accept(Visitor visitor);

}

**Class: Liquor**

**package** liquor;

**class** Liquor **implements** Visitable {

**private** **double** price;

Liquor(**double** item) {

price = item;

}

**public** **double** accept(Visitor visitor) {

**return** visitor.visit(**this**);

}

**public** **double** getPrice() {

**return** price;

}

}

**Class: Necessity**

**package** liquor;

**class** Necessity **implements** Visitable {

**private** **double** price;

Necessity(**double** item) {

price = item;

}

**public** **double** accept(Visitor visitor) {

**return** visitor.visit(**this**);

}

**public** **double** getPrice() {

**return** price;

}

}

**Class: Tobaco**

**package** liquor;

**class** Tobacco **implements** Visitable {

**private** **double** price;

Tobacco(**double** item) {

price = item;

}

**public** **double** accept(Visitor visitor) {

**return** visitor.visit(**this**);

}

**public** **double** getPrice() {

**return** price;

}

}

**Interface: Visitor**

**package** liquor;

**interface** Visitor {

**public** **double** visit(Liquor liquorItem);

**public** **double** visit(Tobacco tobaccoItem);

**public** **double** visit(Necessity necessityItem);

}

**Class: TaxVisitor**

**package** liquor;

**import** java.text.DecimalFormat;

**class** TaxVisitor **implements** Visitor {

DecimalFormat df = **new** DecimalFormat("#.##");

**public** TaxVisitor() {

}

**public** **double** visit(Liquor liquorItem) {

System.***out***.println("Liquor Item: Price with Tax");

**return** Double.*parseDouble*(df.format((liquorItem.getPrice() \* .18) + liquorItem.getPrice()));

}

**public** **double** visit(Tobacco tobaccoItem) {

System.***out***.println("Tobacco Item: Price with Tax");

**return** Double.*parseDouble*(df.format((tobaccoItem.getPrice() \* .32) + tobaccoItem.getPrice()));

}

**public** **double** visit(Necessity necessityItem) {

System.***out***.println("Necessity Item: Price with Tax");

**return** Double.*parseDouble*(df.format(necessityItem.getPrice()));

}

}

**Class: TaxHolidayVisitor**

**package** liquor;

**import** java.text.DecimalFormat;

**class** TaxHolidayVisitor **implements** Visitor {

DecimalFormat df = **new** DecimalFormat("#.##");

**public** TaxHolidayVisitor() {

}

**public** **double** visit(Liquor liquorItem) {

System.***out***.println("Liquor Item: Price with Tax");

**return** Double.*parseDouble*(df.format((liquorItem.getPrice() \* .10) + liquorItem.getPrice()));

}

**public** **double** visit(Tobacco tobaccoItem) {

System.***out***.println("Tobacco Item: Price with Tax");

**return** Double.*parseDouble*(df.format((tobaccoItem.getPrice() \* .30) + tobaccoItem.getPrice()));

}

**public** **double** visit(Necessity necessityItem) {

System.***out***.println("Necessity Item: Price with Tax");

**return** Double.*parseDouble*(df.format(necessityItem.getPrice()));

}

}

**Class: VisitorTest**

**package** liquor;

**public** **class** VisitorTest {

**public** **static** **void** main(String[] args) {

TaxVisitor taxCalc = **new** TaxVisitor();

TaxHolidayVisitor taxHolidayCalc = **new** TaxHolidayVisitor();

Necessity milk = **new** Necessity(3.47);

Liquor vodka = **new** Liquor(11.99);

Tobacco cigars = **new** Tobacco(19.99);

System.***out***.println(milk.accept(taxCalc) + "\n");

System.***out***.println(vodka.accept(taxCalc) + "\n");

System.***out***.println(cigars.accept(taxCalc) + "\n");

System.***out***.println("TAX HOLIDAY PRICES\n");

System.***out***.println(milk.accept(taxHolidayCalc) + "\n");

System.***out***.println(vodka.accept(taxHolidayCalc) + "\n");

System.***out***.println(cigars.accept(taxHolidayCalc) + "\n");

}

}

Result:

Necessity Item: Price with Tax

3.47

Liquor Item: Price with Tax

14.15

Tobacco Item: Price with Tax

26.39

TAX HOLIDAY PRICES

Necessity Item: Price with Tax

3.47

Liquor Item: Price with Tax

13.19

Tobacco Item: Price with Tax

25.99