1.

(a)

private JComboBox<AccountType> accountTypes;

private AccountType actType = AccountType.SAVINGS;

(b)(c)

accountTypes = new JComboBox<>(AccountType.values());

accountTypes.setBounds(16, 238, 176, 24);

inputDetailJPanel.add(accountTypes);

accountTypes.addActionListener(

new ActionListener() {

public void actionPerformed(ActionEvent event) {

actType = (AccountType) accountTypes.getSelectedItem();

}

}

);

(d)

setSize(670, 340);

(e)

inputDetailJPanel.setBounds(16, 16, 208, 280);

(f)

displayJTextArea.setBounds(250, 16, 400, 245);

2.

(a)

AbstractBankAccount[] myAccounts = new AbstractBankAccount[MAXACCOUNTS];

(b)

try {

if (actType == AccountType.SAVINGS) {

myAccounts[accountCount] = new SavingsAccount(accountHolderName, initialDeposit);

} else if (actType == AccountType.CREDIT) {

myAccounts[accountCount] = new CreditAccount(accountHolderName, initialDeposit);

}

accountCount++;

} catch (MyException ex) {

JOptionPane.showMessageDialog(null, ex.getMessage(), "Custom Error", JOptionPane.ERROR\_MESSAGE);

} catch (Exception e) {

MyException newExc = new MyException("An unhandled error occurred!!");

JOptionPane.showMessageDialog(null, newExc.getMessage(), "Error", JOptionPane.ERROR\_MESSAGE);

}

3.

(a)

public enum BikeUses {

OFF\_ROAD,

TRACK,

ROAD,

DOWNHILL,

TRAIL

}

(b)

(i)

BikeUses terrain = BikeUses.OFF\_ROAD;

(ii)

BikeUses terrain = BikeUses.TRACK;

(iii)

(iv)

public String toString() {

return "Oracle Cycles\n" +

"This bike has " + handlebars + " handlebars on a " + frame + " frame with " + gears + " gears.\n" +

"It has a " + seat + " seat with " + tyres + " tyres.\n" +

"This mountain bike is a " + suspension + " bike and has a frame size of " + frameSize + " inches.\n" +

"This bike is best for " + terrain.toString().toLowerCase();

}

4.

(a)

public class Cuboid<T extends Number> {

private T length;

private T breadth;

private T height;

public void setLength(T length) {

this.length = length;

}

public void setBreadth(T breadth) {

this.breadth = breadth;

}

public void setHeight(T height) {

this.height = height;

}

public String toString() {

return "Cuboid dimensions: Length = " + length + ", Breadth = " + breadth + ", Height = " + height;

}

public double getVolume() {

return length.doubleValue() \* breadth.doubleValue() \* height.doubleValue();

}

}

(b)

public class CuboidDriver {

public static void main(String[] args) {

Cuboid<Double> c1 = new Cuboid<>();

c1.setLength(1.3);

c1.setBreadth(2.2);

c1.setHeight(2.0);

System.out.println(c1);

System.out.println("Volume: " + c1.getVolume());

}

}

(c)

public class CuboidDriver {

public static void main(String[] args) {

Cuboid<Integer> c2 = new Cuboid<>();

c2.setLength(1);

c2.setBreadth(2);

c2.setHeight(3);

System.out.println(c2);

System.out.println("Volume: " + c2.getVolume());

}

}

(d),(e)

System.out.println("Volume: " + c1.getVolume());

System.out.println("Volume: " + c2.getVolume());