



```
public class FFAccount {
      private String accountNumber;
      private int numberOfMiles;
      private int numberOfFlights;
      private AccountState accountState;
      public AccountState getAccountState() {
            return accountState;
      public void setAccountState(AccountState accountState) {
            this.accountState = accountState;
      public FFAccount(String aNumber) {
            accountNumber=aNumber;
            accountState = new Silver(this);
      public void addFlight(int newMiles) {
            accountState.addFlight(newMiles);
      ...//getter and setter methods
public abstract class AccountState {
      protected final FFAccount account;
      public AccountState(FFAccount account) {
            this.account=account;
      public abstract void addFlight(int newMiles);
      public abstract String getAccountType();
}
public class Silver extends AccountState{
      public Silver(FFAccount account) {
            super(account);
      public void addFlight(int newMiles){
            account.setNumberOfMiles(account.getNumberOfMiles() + newMiles);
            account.setNumberOfFlights(account.getNumberOfFlights()+1);
            checkForUpgrade();
      public void checkForUpgrade() {
            if ((account.getNumberOfMiles() > 100000) | |
                    (account.getNumberOfFlights() > 95)){
                  AccountState newState = new Gold(account) ;
                  account.setAccountState(newState);
            }
      public String getAccountType() {
           return "Silver";
```

```
}
public class Gold extends AccountState {
      public Gold(FFAccount account) {
            super(account);
      public void addFlight(int newMiles){
         account.setNumberOfMiles(account.getNumberOfMiles()+(2*newMiles));
         account.setNumberOfFlights(account.getNumberOfFlights()+1);
         checkForUpgrade();
      public void checkForUpgrade() {
            if ((account.getNumberOfMiles() > 150000) | |
                 (account.getNumberOfFlights() > 145)){
                  AccountState newState = new Platinum(account) ;
                  account.setAccountState(newState);
            }
      public String getAccountType() {
            return "Gold";
}
public class Platinum extends AccountState{
      public Platinum(FFAccount account) {
            super(account);
      public void addFlight(int newMiles) {
        account.setNumberOfMiles(account.getNumberOfMiles()+(3*newMiles));
        account.setNumberOfFlights(account.getNumberOfFlights()*2);
      public String getAccountType() {
            return "Platinum";
}
```

The most important parts of this question is that you have different objects for Silver, Gold and Platinum, and that the states themselves create the next state object, for example with "new Gold()"