**Objects and Classes (Overview)**

* We have 3 classes:- Company, Consumer, Plan
* Plan divides into three other SPECIFIC plans that are Data Plan, Long Distance Plan, Talk Plan
* Main program: plans.

**Properties and Methods**

Definition: Method - is function.

**UML stuff here, attributes and behaviours!!!!!**

For example, in Company class, we have addConsumer(Consumer[] consumerList) this adds a consumer in the consumer list.

Another example, in the Consumer class we have Consumer(String name, Company[] companyList, Plan[] planList) this takes a name, a list of companies and a list of plans) → main program explained…? Possibly.

methods are actions an object can be asked to perform

attributes are properties and methods

properties store data

properties and methods are the attributes and behaviours that the classes or objects have. like (look at the UMLs) these ones.

**Inheritance**

Definition: when a new class acquires methods and properties of another existing class.

Inheritance is when objects acquire the properties of the parent object

Parent class **“Plan”** attributes are all common to its child classes.

To differentiate between the 3 child classes, each child class has a unique characteristic that is different from each other.

For example the talk plan offers unlimited calling and unlimited texting but the other plans dont. Also, talk plan does not offer long distance because that would then fall under the long distance plan. And talk plan also does not offer data because data is only unique to the data plan.

**Overloading**

Definition: same name different parameters (adds parameters too)

overloading is when you use the same method for different classes

Example:

Company()

Company(String name)

Company(String name, Plan[] plans)

Company(String name, Plans[] plans, Consumer[] consumer)

**Overriding**

Example: **getMonthlyCharges() : float →** appears as a constructor under **Plan** Class AND its child classes.

The child classes (DataPlan, LongDistancePlan, and TalkPlan) overrides the attributes that were given to them by the parent class → like $ amount for Data Plan is going to be different from $ amount for Long Distance Plan and Talk Plan monthly.

* Overriding is when the child class overwrites the attributes given to them by the parent class above it.

**Polymorphism**

Definition:

When a parent class reference is used to refer to a child class object.

When you group all the different objects to work together.

The only way to compare two different objects is to refer the two objects back to the parent class

In the main program we reference a child Data Plan in the Plan class list.

**Computer science presentation:**

**(*We may have to let Mr. Reid know that our presentation is going to be a little different from the groups beforehand*)**

**NEW Introduction:**

We understand that the cellphone plans are getting out of control, and companies must struggle to keep a track of everything from its clients, their plans and the company’s monthly income. But what if there was something that could do these things? Then wait no more, we introduce CellTech, our company manages AND tracks a set of clients and plans that include text rates, data rates, talk minutes, etc, that the consumers will have chosen after choosing companies, like Trump Network, Cring INC, and United Men Limited that provides the consumer with a plan that is best suited to their lifestyle.

**Conclusion:**

By choosing CellTech, companies will be able to keep a track of their client and their desired plan as well as receive monthly income from their consumers. Our program is designed to help you remain organized and stay ahead of other competitive cellphone companies. We hope that you will give us the opportunity to work with you in the near future. Thank you for listening.