# OOP Concepts

Section 1:

1. Abstraction – Used to display only necessary information.
2. Encapsulation – The binding of fields and methods together.
3. Inheritance – Deriving one object or class from another.
4. Polymorphism – When multiple things are performed on a class call.
5. An object holds one value, a class holds a group of objects.
6. Transfer of data defined as private in one class to other classes with setter and getter methods.

Section 2:

1. Inheritance is when you create a class or object with methods from another class.
2. Extends.
3. Base class and derived class.

Section 3:

1. When multiple things are performed on a class call.
2. Compile time is when methods share a name but have different parameters, and run time is when a child rewrites a method.
3. Overriding is using the @Override keyword, and overloading is when you have multiple methods with the same name.

Section 4:

1. Abstraction is when you hide the background code and only display the necessary information for the user, encapsulation is hiding the data with a method to protect it.
2. By using abstraction classes and interfaces.

Section 5:

1. The binding of fields and methods together.
2. Defining objects as private and then using getter and setter methods to transfer it.