Android - Dev, an Intro

What to expect

~ 15 minutes

1. Intro to Programming: Java programming basics (e.g., what a variable is, what a class is and what a method is)

~ 15 minutes

2. Intro to Android: The basics of an android app (e.g., where to locate layout files, your manifest and activities)

~ 15 minutes

3. Building an App: The basics of views, instantiation and error handling

~ 10 minutes

4. Demonstration:IDEO U fun app

~ 5 minutes

5. Quiz

Intro to Programming

~ This should take15 minutes

<u>At the end of this lesson you'll be able to:</u>

- Explain what a variable is
- Explain what a class is
- Explain what a method is
- Explain their relationship to each other

Intro to Programming: What is a variable?

- A stored value
- A variable can be a number, a character or a string of characters (i.e., a word)

<u>Variables are important because they allow you to:</u>

- Modify a value in many places at one time
- Store a value to be accessed later

Examples of variables:

String hello = “hello”;
int seven = 7;
char austin_first = ‘a’;

Intro to Programming: What is a method?

- A set of code that can be referred to and then invoked
- It contains variables and other methods

<u>Methods are important because they allow you to:</u>
- Create logic within a program
- Create a store value for a chunk of code to be used over and over

Examples of methods:

```
public static void main (String [] args){
}

public static int adding_numbers(int a, int b){
    int total = a + b;
    return total;
}
```

Intro to Programming: What is a class?

- A blueprint used to create an object
- A class defines object data types and methods

<u>Classes are important because they allow you to:</u>
- Create and store methods

Examples of a class:

```
class Main {
    public static void main (String [] args){
    }
}

class Car {
 public static String car(String name){
   return name;
 }
}
```

Intro to Programming: How do they all relate?

- A class holds objects, most commonly methods
- A method contains variables
- Methods and variables create objects. Classes hold those objects — creating a ‘blueprint’ of sorts.

<u>Example of them all working together:</u>

```
class Main {
  public static void main(String[] args) {
    System.out.println(adding_numbers(1, 5));
    System.out.println(Car.car("Lambo"));

  }
  public static int adding_numbers(int a, int b){
    int total = a + b;
    return total;

  }
}

class Car {
 public static String car(String name){
   return name;
 }
}
```

Intro to Android:

~ This should take15 minutes

<u>At the end of this lesson you'll be able to:</u>

- Explain what an activity is
- Explain what a layout file is & how it relates to an activity
- Explain what a manifest is and where to find it

Open Android Studio

Quiz

~ 10 min

What is a variable?

A variable is a stored value and can be a number, string or character

What is a method?

A method is a collection of variables and other methods that can be referred to and invoked

What is a class?

A blueprint, classes contain both methods and variables. They are used to create objects and declare value data types

How do classes, methods and variables relate to each other?

Methods contain variables which store values, classes contain methods which create objects forming a ‘blueprint’ of sorts

Where would I locate an activity?

Where would I locate a layout file?

Where would I locate the manifest?

What is an edit text?

An edit text is a view which users enter text into

What does it mean to instantiate?

It means you’re creating a new instance of an object

Where would you go to check for errors?

Your logical in Android Monitor

Demo of IDEO U app

~ 5 min