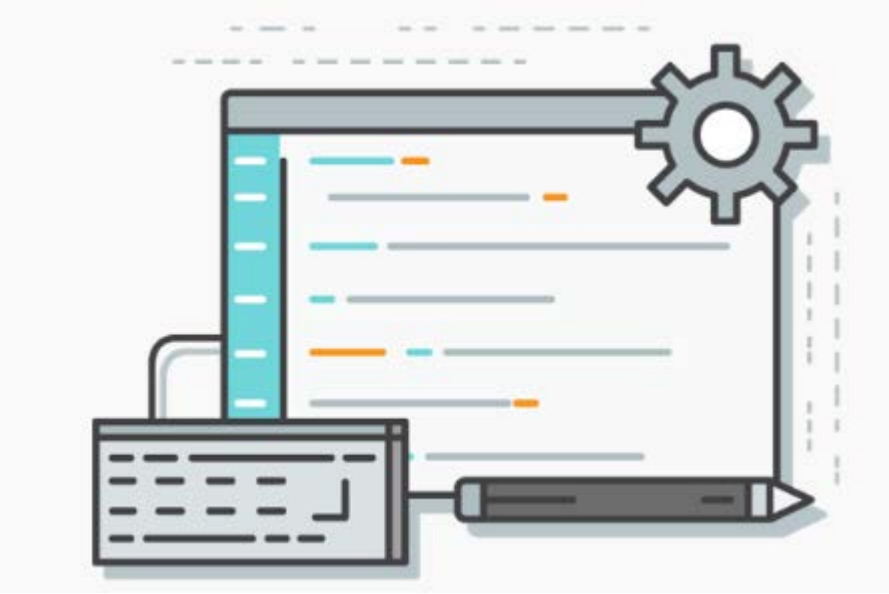
Processing Basics

What is Source Code?

- **Source Code** is a special kind of written document through which a programmer can control a computer.
- Most source code is simply text made of letters, numbers and symbols.



What is Source Code?

- **Source Code** can usually be viewed and edited using any text-editor.
- It is sometimes helpful to use an Integrated Development Environment (IDE), a program that allows you to both edit and run your source code.

```
public class OracleJdbcTest
{
    String driverClass = "oracle.jdbc.driver.OracleDriver";

    Connection con;

    public void init(FileInputStream fs) throws ClassNotFoundException, SQLException
    {
        Properties props = new Properties();
        props.load(fs);
        String url = props.getProperty("db.url");
        String userName = props.getProperty("db.user");
        String password = props.getProperty("db.password");
        Class.forName(driverClass);
```

Source Code

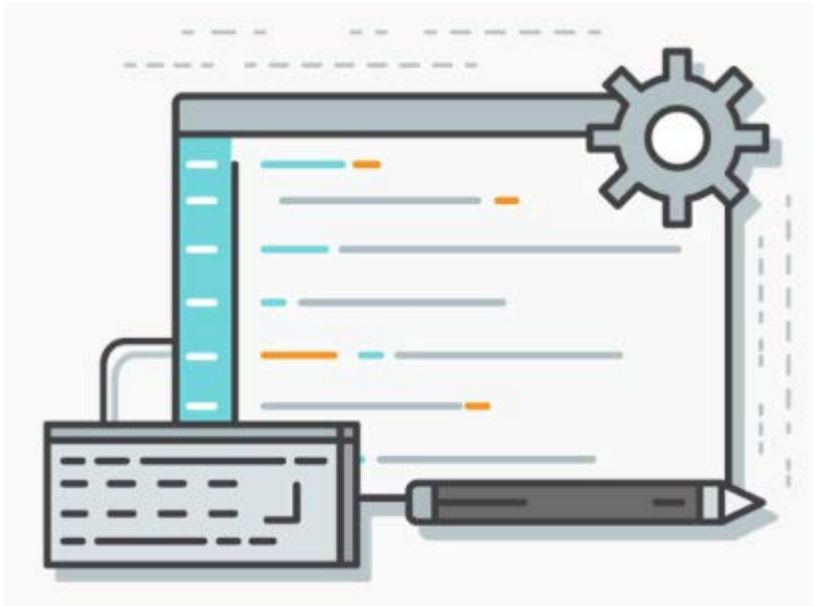
- Processing programs are called **Sketches** and are composed of **one or more source code files**.
- We can run and edit these sketches using the Processing IDE called **PDE (Processing Development Environment).**

Syntax

- The **Syntax** of a computer language is the set of **rules** that defines the combinations of symbols that are considered to be correctly structured for that language.
- Things like **keywords** such as the keywords **true, false,** and **null** are part of a language **Syntax.**
- Other rules, like ending a statement with a semicolon (;) are also part of a language **Syntax.**

Parts of Processing Source Code

- **Processing Source Code** is made up of many different parts including:
  - Comments
  - Statements
  - Expressions
  - Methods/functions
  - White Space



Statements

- **Statements** are the sentences of code. They can perform many different actions.
- All statements end in a **semicolon (;)**
- An example of a statement is:

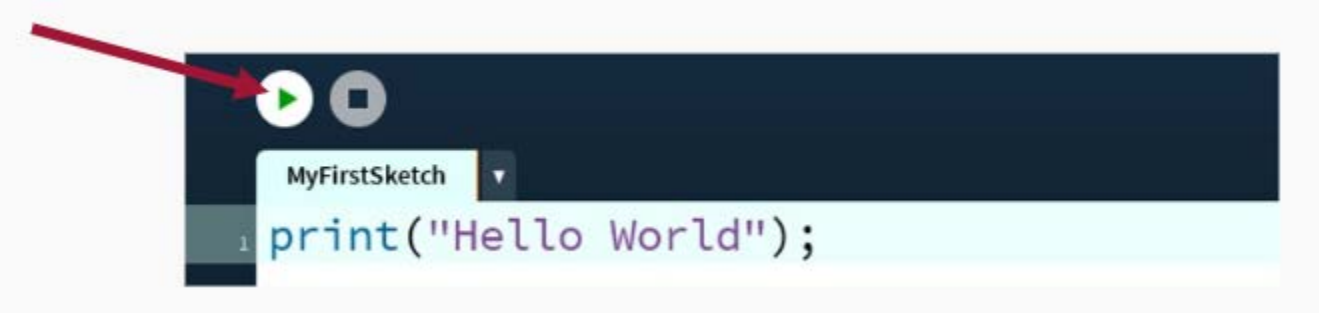
```
print("Hello World");
```

Statements

- This statement performs the action of writing Hello World to the terminal.

```
print("Hello World");
```

- Try it yourself in Processing and click the Play button to run your code:



White Space

- In many programming languages, Processing included, the amount of white space between elements of a program can be arbitrary.
- These two programs will perform the same actions:

```
print( 5*  5)  ;
print("Hello"
);
```

```
print(5*5);
print("Hello");
```

White Space

- While Processing ignores white space, we want our source code to be as readable as possible for other programmers.
- Because of this, white space should make sense to the program and be easy to read and understand.

```
if(age < 16)
{
    print("You can't drive.");
}
```

Summary

- **Source Code** is a special kind of written document through which a programmer can control a computer.
- The **Syntax** of a computer language is the set of **rules** that defines the structure of a language.
- **Statements** are the sentences of code. They can perform many different actions. All statements end in a **semicolon (;)**
- **White space** is ignored by processing but should be used in a way that makes your code readable.