

Assignment 5

Implement the denotational semantics for **while**.

If you are using Haskell it should be straight forward.

If you are using Java or some other object oriented language then you should define an interface

```
public interface Sds {  
    public State execute(State state);  
}
```

and implement one class for each kind of statement.

In both cases the semantics of the while statement should be defined via the equivalence

```
while b do S = if b then (S; while b do S) else skip
```

You should not try to compute the fix point. If your implementation is in a conventional language like Java you must use a **while** statement to implement the while statement of **While**.

Optionally you may implement continuation style semantics for **While** including some statement that cannot be described using the direct style semantics.