

ASTApply.java

```
1 package AST;
2
3 import java.util.List;
4
5
6
7
8
9 public class ASTApply implements ASTNode {
10
11     private ASTNode expFun;
12     private List<ASTNode> expArgs;
13
14     public ASTApply(ASTNode expFun, List<ASTNode> expArgs){
15         this.expArgs = expArgs;
16         this.expFun = expFun;
17     }
18
19     @Override
20     public IValue eval(Environment e) {
21         IValue v1 = expFun.eval(e);
22         if(!(v1 instanceof Closure)) {
23             throw new Error("Invalid function");
24         }
25         Closure c1 = (Closure)v1;
26         Environment e1 = c1.getEnv();
27         Environment e2 = e1.beginScope();
28         for(int i = 0; i < expArgs.size(); i++) {
29             IValue v2 = expArgs.get(i).eval(e);
30             e2.assoc(c1.getArg().get(i), v2);
31         }
32         IValue v3 = c1.getExp().eval(e2);
33         return v3;
34     }
35
36 }
37
```