**Danial Ahmed**

**Talha Baloch**

**Imdad Khan**

**(IF – Elif – Else) Parser & Scanner**

1. Start 🡪 S’
2. S’ 🡪 ifExpr
3. S’ 🡪 EPSILON
4. ifExpr 🡪 if(){ S’ } elExpr
5. elExpr 🡪 elif(){ S’ } elExpr
6. elExpr 🡪 S’
7. elExpr 🡪 elseExpr
8. elseExpr 🡪 else{ S’ } S’

First & Follow

|  |  |  |
| --- | --- | --- |
| **Non Terminal** | **First** | **Follow** |
| **Start** | **{** EPSILON,if(){ **}** | **{** $ **}** |
| **S’** | **{** EPSILON, if(){ **}** | **{** $,} **}** |
| **ifExpr** | **{** if(){ **}** | **{** $,} **}** |
| **elExpr** | **{** elif(){, EPSILON, if(){, else{ **}** | **{** $,} **}** |
| **elseExpr** | **{** else{ **}** | **{** $,} **}** |

Prase Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **If(){** | **}** | **elif(){** | **else{** | **$** |
| **Start** | [P1](#P1) |  |  |  | [P1](#P1) |
| **S’** | [P2](#P2) | [P3](#P3) |  |  | [P3](#P3) |
| **ifExpr** | [P4](#P4) |  |  |  |  |
| **elExpr** | [P6](#P6) | [P6](#P6) | [P5](#P5) | [P7](#P7) | [P6](#P6) |
| **elseExpr** |  |  |  | [P8](#P8) |  |