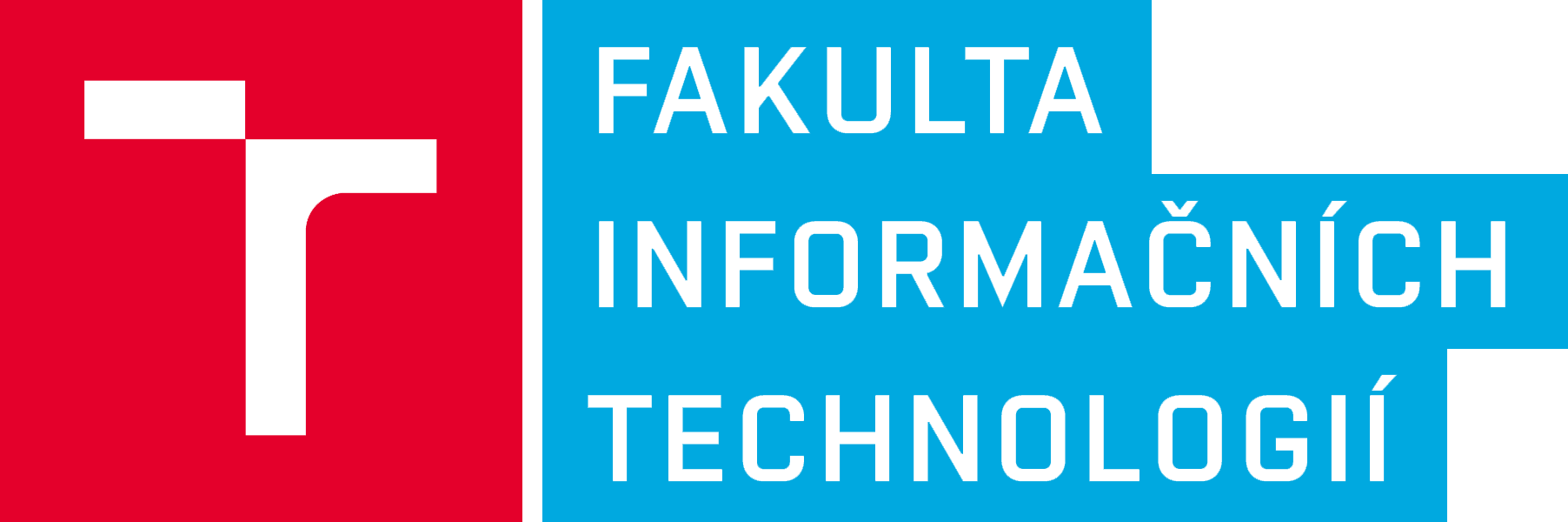
Faculty of information technology

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Documentation to the project for the IFJ and IAL courses

**Implementation of the compiler of the IFJ18 programming language**

Team 037, variant I.

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# **Teamwork**

# **Implementation**

# **Conclusion**

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# **Attachments**

**Attachment 1:**

**Attachment 2: LL grammar**

1. <start> → <function> <st-list>
2. <function> → ‘def’ <function-head> <st-list> <function-tail> <function>
3. <function> → ε
4. <function-head> → <function-id> ‘(’ <par> ‘)’ ‘EOL’
5. <function-tail> → ‘end’ ‘EOL’
6. <par> → <id> <next-par>
7. <par> → ε
8. <next-par> → ‘,’ <par>
9. <next-par> → ε
10. <st-list> → <stat> <st-list>
11. <st-list> → ‘end’ ‘EOL’
12. <st-list> → ε
13. <st-list> → ‘EOL’
14. <stat> → <id> <eval>
15. <eval> → ε
16. <eval> → ‘=’ <assign>
17. <assign> → <expr>
18. <assign> → <function-id> ‘(’ <par> ‘)’
19. <stat> → ‘if’ <expr> ‘then’ ‘EOL’ <st-list> ‘else’ ‘EOL’ <st-list> ‘end’ ‘EOL’
20. <stat> → ‘while’ <expr> ‘do’ ‘EOL’ <st-list> ‘end’ ‘EOL’

**Attachment 3: LL parsing table**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | + | - | \* | / | < | <= | > | >= | '==’ | != | ( | ) | I | $ |
| + | > | > | < | < | > | > | > | > | > | > | < | > | < | > |
| - | > | > | < | < | > | > | > | > | > | > | < | > | < | > |
| \* | > | > | > | > | > | > | > | > | > | > | < | > | < | > |
| / | > | > | > | > | > | > | > | > | > | > | < | > | < | > |
| < | < | < | < | < | '=’ | '=’ | '=’ | '=’ | > | > | E | E | < | E |
| <= | < | < | < | < | '=’ | '=’ | '=’ | '=’ | > | > | E | E | < | E |
| >= | < | < | < | < | '=’ | '=’ | '=’ | '=’ | > | > | E | E | < | E |
| '==’ | < | < | < | < | '=’ | '=’ | '=’ | '=’ | '=’ | '=’ | E | E | < | E |
| != | < | < | < | < | < | < | < | < | '=’ | '=’ | E | E | < | E |
| ( | < | < | < | < | E | E | E | E | E | E | < | '=’ | < | E |
| ) | > | > | > | > | > | > | > | > | > | > | E | > | E | > |
| I | > | > | > | > | > | > | > | > | > | > | E | > | E | > |
| $ | < | < | < | < | E | E | E | E | E | E | < | E | < | E |

**Attachment 4: Precedence table**