**Theory of automata task 8**

**ID: 18k0205**

**Acceptance by final state**:

Pda can be accepted in the final state if it reads in zero or after reading the entire output.

**Acceptance by empty stack:**

On reading the input string from the initial configuration for some PDA, the stack of PDA gets empty.

Let P =(Q, ∑, Γ, δ, q0, Z, F) be a PDA. The language acceptable by empty stack can be defined as:

N(PDA) = {w | (q0, w, Z) ⊢\* (p, ε, ε), q ∈ Q}

**From empty stack to final state:**

The conversion from a PDA Pn that accepts a language L by empty stack to a PDA Pf that accepts L by final state.

**From final state to empty stack:**

PDA that accepts a language by final state and constructs another PD that accepts language by stack.