# Εργασία 1

## Η γραμματική:

GOAL → EXPRESSION

EXPRESSION → TERM REST_EXPRESSION

REST_EXPRESSION → + TERM REST_EXPRESSION | - TERM REST_EXPRESSION | ε

TERM → FACTOR REST_TERM

REST_TERM → * FACTOR REST_TERM | / FACTOR REST_TERM | ε

FACTOR → [0-9] | ( EXPRESSION )

## Τα FIRST

FIRST(GOAL) = { [0-9] , ( }

FIRST(EXPRESSION) = { [0-9] , ( }

FIRST(REST_EXPRESSION) = { + , - , ε }

FIRST(TERM) = { [0-9] , ( }

FIRST(REST_TERM) = { * , / , ε }

FIRST(FACTOR) = { [0-9] , ( }

## Τα FOLLOW

FOLLOW(GOAL) = { EOF }

FOLLOW(EXPRESSION) = { EOF , ) }

FOLLOW(REST_EXPRESSION) = { EOF , ) }

FOLLOW(TERM) = { + , - , EOF , ) }

FOLLOW(REST_TERM) = { + , - , EOF , ) }

FOLLOW(FACTOR) = { + , - , * , / , EOF , ) }

## Τα FIRST+ για τους κανόνες που το FIRST τους περιέχει το ε.

FIRST+(REST_EXPRESSION) = { + , - , EOF, ) }

FIRST+(REST_TERM) = { * , / , + , - , EOF , ) }

## To Lookahead Table

|  | + , - | * , / | ( | ) | [0-9] | EOF |
|---|---|---|---|---|---|---|
| EXPRESSION | Error | Error | TERM REST_EXPRESSION | Error | TERM REST_EXPRESSION | Error |
| REST_EXPRESSION | TERM REST_EXPRESSION | Error | Error | ε | Error | ε |
| TERM | Error | Error | FACTOR REST_TERM | Error | FACTOR REST_TERM | ε |
| REST_TERM | ε | FACTOR REST_TERM | Error | ε | Error | ε |
| FACTOR | Error | Error | EXPRESSION ) | Error | Nothing | Error |