**Write code in ‘CodeRunner.py’ to execute programs with following grammars.**

**Example 1:**

factor

: Integer

;

term

: term (Mul | Div) factor

| factor

;

expression

: expression (Add | Sub) term

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Integer: [0-9]+ ;

**Example 2:**

factor

: Integer

;

term

: factor (Mul | Div) term

| factor

;

expression

: term (Add | Sub) expression

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Integer: [0-9]+ ;

**Example 3:**

factor

: Integer

;

term

: term (Add | Sub) factor

| factor

;

expression

: expression (Mul | Div) term

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Integer: [0-9]+ ;

**Exercise 1:**

intTerm: Integer;

factor

: intTerm

;

term

: term (Mul | Div | Mod) factor

| factor

;

expression

: expression (Add | Sub) term

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Mod: '%'

Integer: [0-9]+ ;

**Exercise 2:**

intTerm: Integer;

factor

: intTerm

;

term

: factor (Mul | Div | Mod) term

| factor

;

expression

: term (Add | Sub) expression

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Mod: '%'

Integer: [0-9]+ ;

**Exercise 3:**

intTerm: Integer;

factor

: intTerm | **Sub intTerm**

;

term

: factor (Mul | Div | Mod) term

| factor

;

expression

: term (Add | Sub) expression

| term

;

program

: expression EOF

;

Add : '+';

Sub : '-';

Mul : '\*';

Div : '/';

Mod: '%'

Integer: [0-9]+ ;