Experiment-2:

Construction of a tree of student-teacher-course-year and doing arithmetic operations (sum, subtraction, multiplication, remainder).

Objective:

We have to create a prolog code to make a hierarchy of student-teacher-course-year tree and check the validation of this tree. Next we have to create another prolog code to determine arithmetic operations (sum, subtraction, multiplication, remainder).

Arithmetic operation:

%sum of two numbers

```
sum(X,Y):-

S is X+Y,

write(S).
```

%sum of two numbers

```
sub(X,Y):-

S is X-Y,

write(S).
```

%multiplication of two numbers

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mul(X,Y):-

M is X*Y,

write(M).
```

%power

pow(X,Y):-

P is X^Y,

write(P).

%mod of two numbers

mod(X,Y):-

M is mod(X,Y),

write(M).

Searching from student-teacher-course-year tree:

teachingYear(_2021,abdul).

teachingYear(_2022,komol).

teachingYear(_2021,latif).

teaches(latif,cse_401).

teaches(latif,cse_402).

teaches(abdul,cse_403).

teaches(komol,cse_404).

studiedBy(cse_401,maksuda).

studiedBy(cse_401,munia).

studiedBy(cse_402,mouno).

studiedBy(cse_403,purno).

studiedBy(cse_404,nishat).

studyYear(_2021,munia).

studyYear(_2021,maksuda).

studyYear(_2021,mouno).

studyYear(_2021,purno).

studyYear(_2022,nishat).

courseTeacher(X,Z):-

teachingYear(Z,Y),teaches(Y,X),

write(Y).

courseName(X,Z):-

teaches(X,Y), studiedBy(Y,Z),write(Y).