

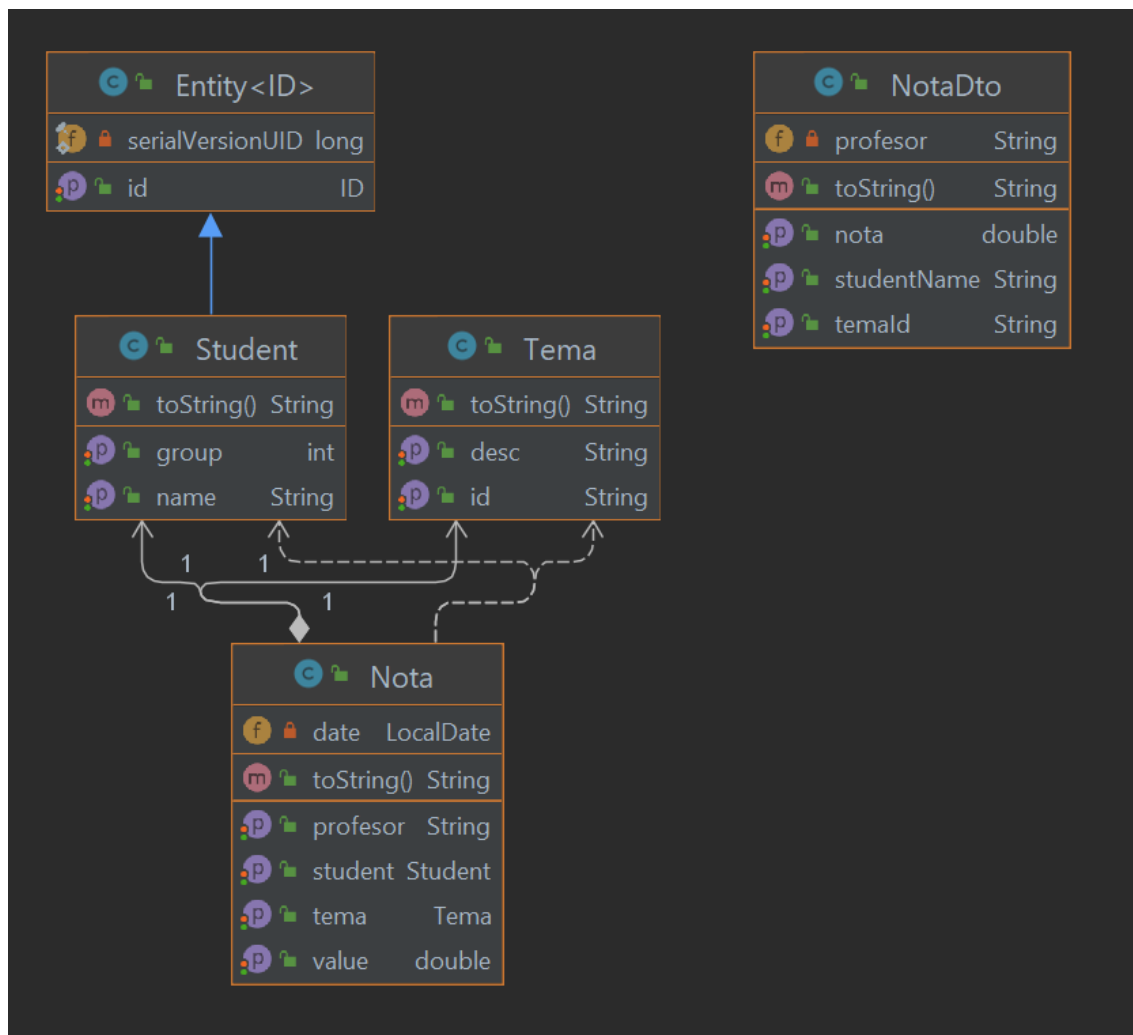
A. Ce afiseaza urmatoarele programe?

```
List<String> list = Arrays.asList("asf", "bcd", "asd", "bed", "bbb");
list.stream()
    .filter(x->{
        System.out.println("filter: "+x);
        return x.startsWith("B");
    })
    .map(x->{
        System.out.println("map: "+x);
        return x.toUpperCase();
    })
    .forEach(x->{
        System.out.println("forEach: ");
        System.out.println(x);
    });
```

```
List<String> list = Arrays.asList("asf", "bcd", "asd", "bed", "bbb");
String rez=list.stream()
    .filter(x -> {
        return x.startsWith("b");
    })
    .map(x -> {
        return x.toUpperCase();
    })
    .reduce( identity: "", (x,y)->x+y);
System.out.println(rez);
```

```
List<String> list = Arrays.asList("asf", "bcd", "asd", "bed", "bbb");
Optional<String> rez=list.stream()
    .filter(x -> {
        //System.out.println("filter: " + x);
        return x.startsWith("b");
    })
    .map(x -> {
        //System.out.println("map: " + x);
        return x.toUpperCase();
    })
    .reduce((x,y)->x+y);
if (!rez.isEmpty())
    System.out.println(rez.get());
rez.ifPresent(x-> System.out.println(x));
```

B. Consideram urmatoarea diagrama de clase:



Fiind date o lista de Studenti, o lista de Teme si o lista Note, sa se realizeze urmatoarele rapoarte:

1. toate notele acordate de un anumit profesor, la o anumita grupa
2. media notelor pt fiecare student ( `Collectors.groupingBy`)
3. media notelor la o anumita tema
4. tema cu cea mai mare medie
5. tema cea mai grea (media notelor cea mai mica)