

**Sandra Sáez Ibarra 1ºS**

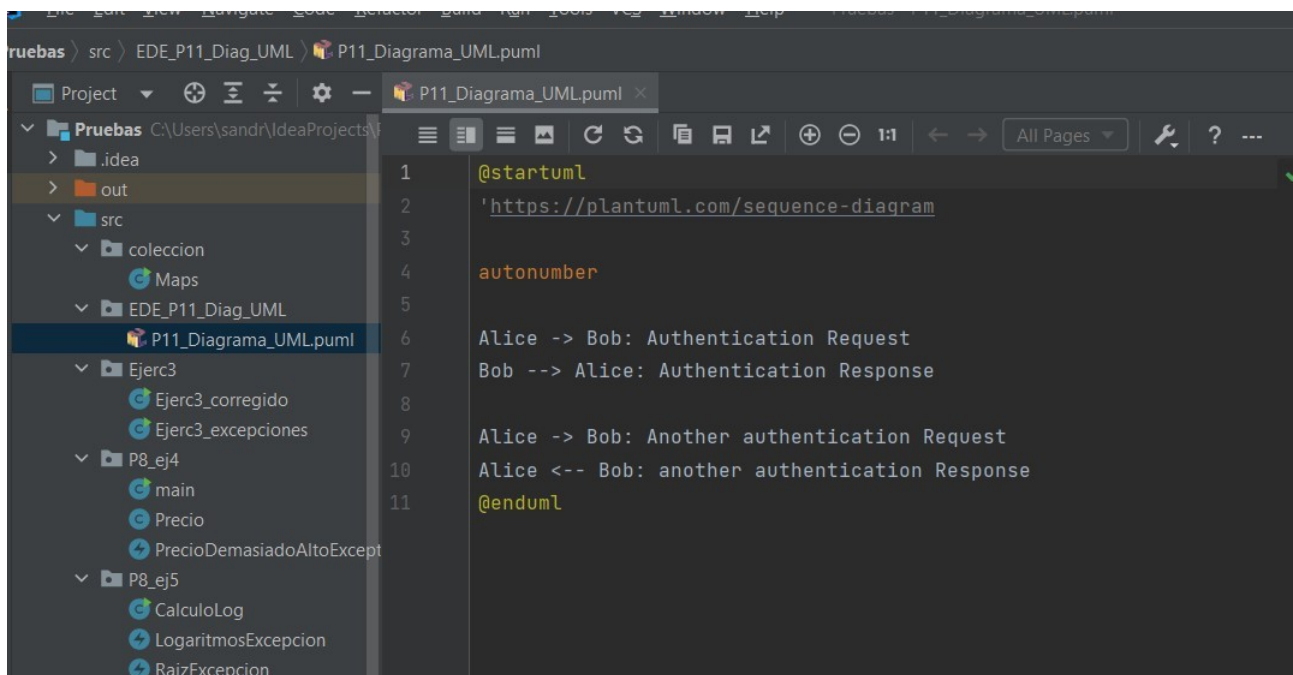
## **Práctica Diagramas UML Clases.**

### **Enlace para el repositorio:**

<https://github.com/sandrasd89/UMLClasesSandra.git>


Lo primero que he hecho ha sido instalar el plugin PlantUml para poder proceder a realizar la práctica correspondiente.

Ha creado un package, donde he creado un archivo .puml:



```
1  @startuml
2  'https://plantuml.com/sequence-diagram
3
4  autonumber
5
6  Alice -> Bob: Authentication Request
7  Bob --> Alice: Authentication Response
8
9  Alice -> Bob: Another authentication Request
10 Alice <-- Bob: another authentication Response
11 @enduml
```


Después, he creado un repositorio en Github:



[Pull requests](#) [Issues](#) [Codespaces](#) [Marketplace](#) [Explore](#)

## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)


Owner \*  
 sandrasd89


Repository name \*

✔ UMLClasesSandra is available.

Great repository names are short and memorable. Need inspiration? How about [congenial-goggles?](#)

Description (optional)

☒  **Public**  
Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**  
You choose who can see and commit to this repository.


Initialize this repository with:


☐ **Add a README file**  
This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore


Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

  
**Set up GitHub Copilot**  
Use GitHub's AI pair programmer to autocomplete suggestions as you code.

  
**Invite collaborators**  
Find people using their GitHub username or email address.

### Quick setup — if you've done this kind of thing before

 Set up in Desktop or ☐ HTTPS ☐ SSH

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

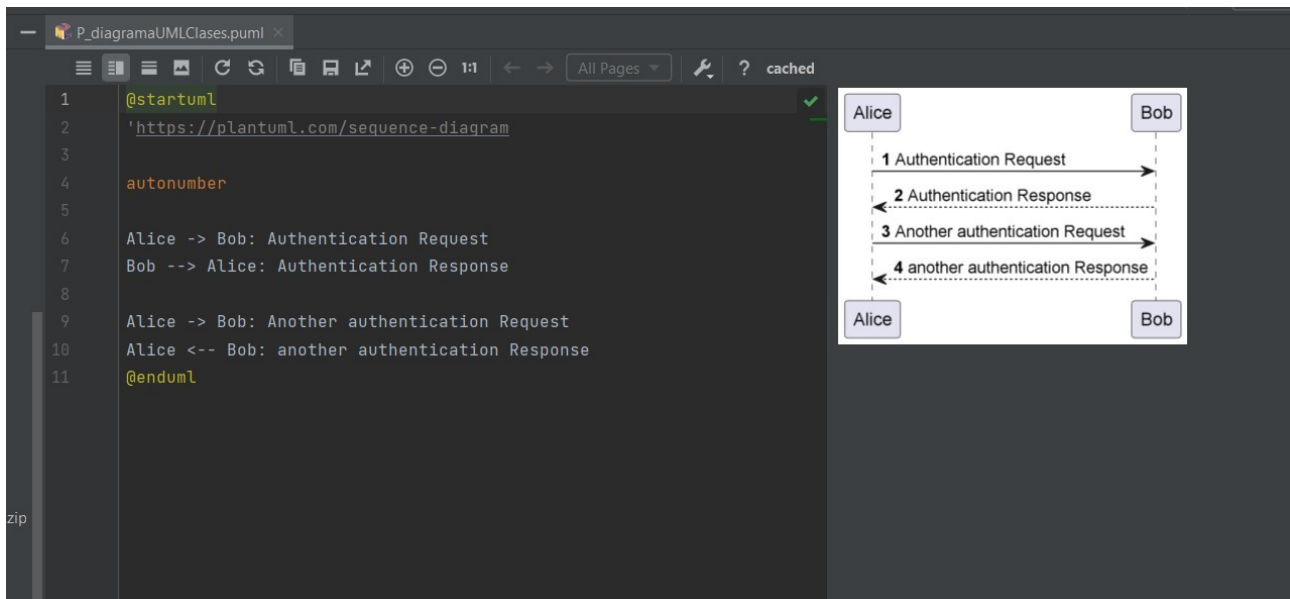
### ...or create a new repository on the command line

```
echo "# UMLClasesSandra" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/sandrasd89/UMLClasesSandra.git
git push -u origin main
```

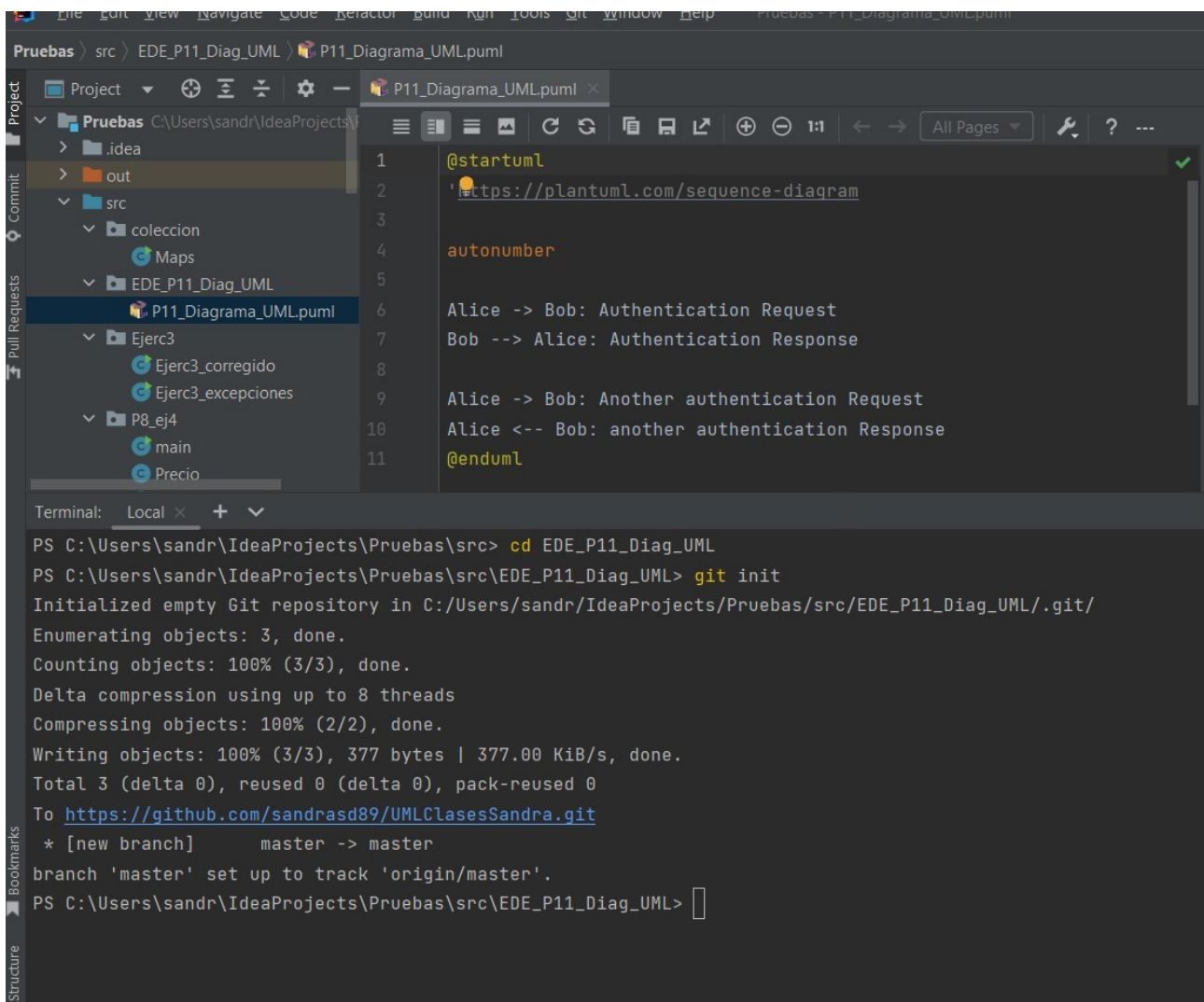
### ...or push an existing repository from the command line

```
git remote add origin https://github.com/sandrasd89/UMLClasesSandra.git
git branch -M main
git push -u origin main
```

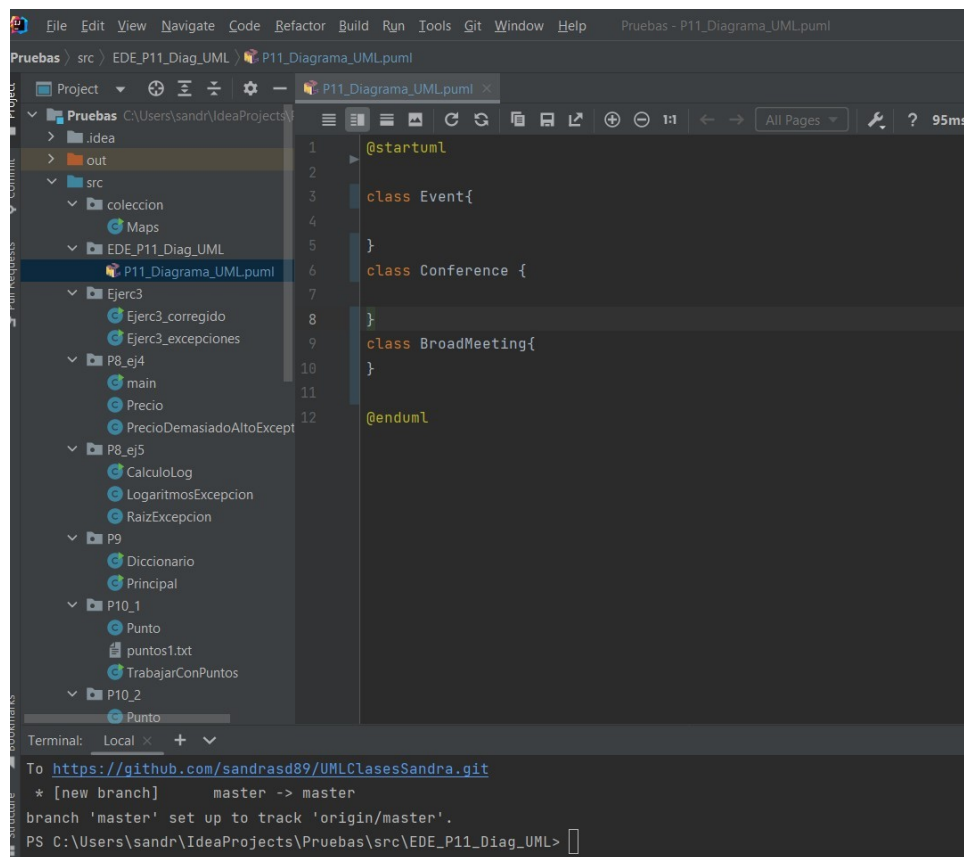
He abierto el archivo que he creado para poder realizar el diagrama requerido:



He inicializado el git para poder subir al repositorio el trabajo realizado:



He creado las clases Event, Conference y BroadMeeting, con su correspondiente commit en el repositorio:

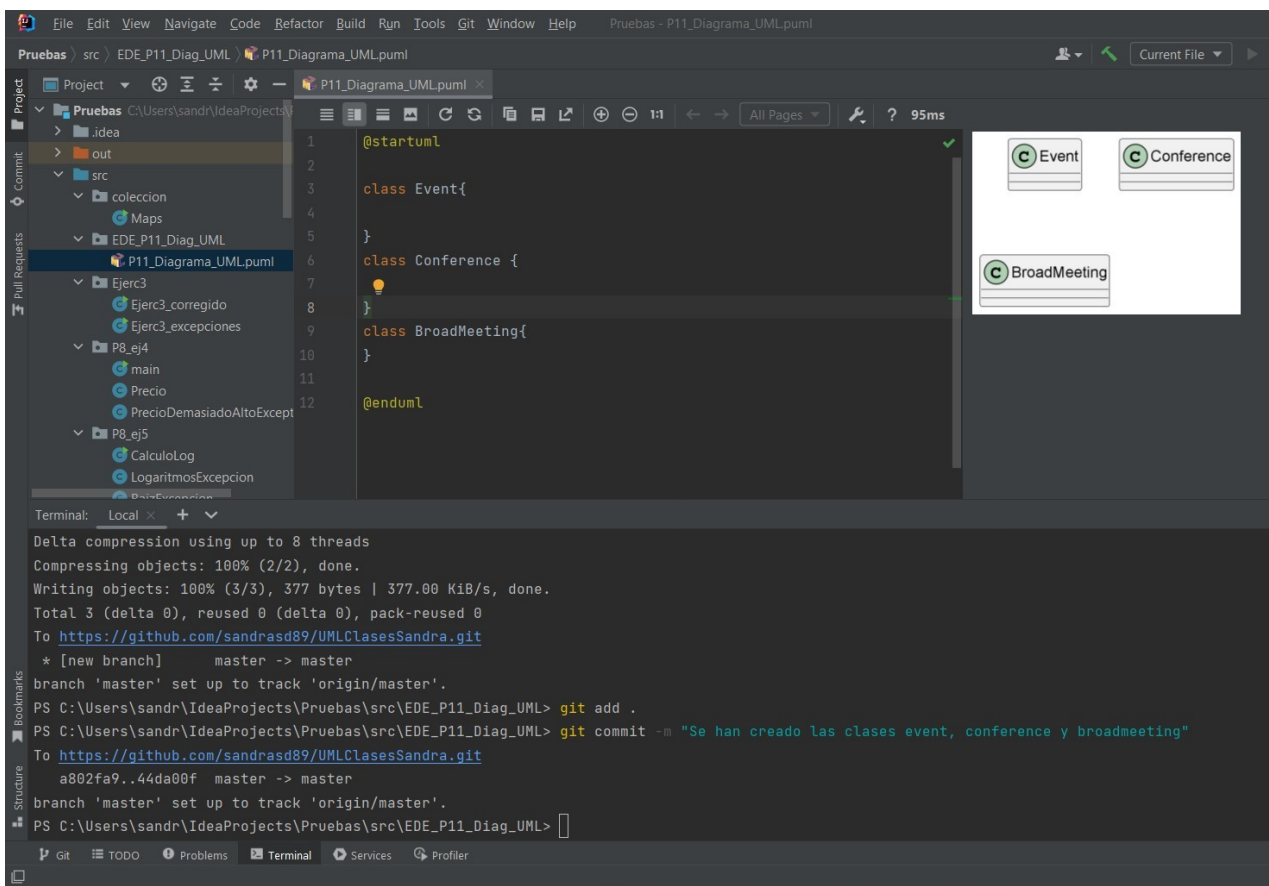


The screenshot shows an IDE window titled "Pruebas - P11\_Diagrama\_UML.puml". The left sidebar displays a project structure with folders like "src", "coleccion", "Maps", "Ejerc3", "P8\_ej4", "P8\_ej5", "P9", "P10\_1", and "P10\_2". The main editor area shows the following UML code:

```
1 @startuml
2
3 class Event{
4
5 }
6
7 class Conference {
8
9 }
10
11 class BroadMeeting{
12
13 }
14
15 @enduml
```

The bottom terminal window shows the following commands and output:

```
Terminal: Local x + v
To https://github.com/sandrasd89/UMLClasesSandra.git
* [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML>
```



The screenshot shows the same IDE window as above, but with a right sidebar displaying three class diagrams: "Event", "Conference", and "BroadMeeting". The terminal window shows the following commands and output:

```
Terminal: Local x + v
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 377 bytes | 377.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/sandrasd89/UMLClasesSandra.git
* [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han creado las clases event, conference y broadmeeting"
To https://github.com/sandrasd89/UMLClasesSandra.git
a802fa9..44da00f master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML>
```

Ahora, he relacionado las clases Event, Conference y BroadMeeting, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the project 'Pruebas' open. The file explorer on the left shows the project structure, including the 'P11\_Diagrama\_UML.puml' file. The main editor displays the UML diagram and the corresponding Java code. The UML diagram shows three classes: Event, Conference, and BroadMeeting. Event is the superclass, with Conference and BroadMeeting as subclasses. The code defines the classes and includes the necessary imports.

```
@startuml
class Event{
}
class Conference {
}
class BroadMeeting{
}
Event <|-- Conference
Event <|-- BroadMeeting
@enduml
```

The terminal output shows the git commands used to commit the changes:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han creado las clases event, conference y broadmeeting"
To https://github.com/sandrasd89/UMLClasesSandra.git
a802fa9..44da00f master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han relacionado las clases event, conference y broadmeeting"
[master 5e6886b] Se han relacionado las clases event, conference y broadmeeting
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/sandrasd89/UMLClasesSandra.git
44da00f..5e6886b master -> master
branch 'master' set up to track 'origin/master'.
```

Ahora, he creado y jerarquizado las clases Person, Member y BroadMember, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the project 'Pruebas' open. The file explorer on the left shows the project structure, including the 'P11\_Diagrama\_UML.puml' file. The main editor displays the UML diagram and the corresponding Java code. The UML diagram shows four classes: Event, Person, Member, and BroadMember. Event is the superclass for Conference and BroadMeeting. Person is the superclass for Member and BroadMember. The code defines the classes and includes the necessary imports.

```
class Member{
}
class BroadMember {
}
Event <|-- Conference
Event <|-- BroadMeeting
Person <|-- Member
Member <|-- BroadMember
```

The terminal output shows the git commands used to commit the changes:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han creado las clases person, member y broadmember y su jerarquia"
[master 56a65aa] Se han creado las clases person, member y broadmember y su jerarquia
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 422 bytes | 422.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/sandrasd89/UMLClasesSandra.git
5e6886b..56a65aa master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML>
```



Aquí, he relacionado las diferentes clases que tenemos, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The code defines the following classes and relationships:

```
classDiagram
    class Person
    class Event
    class Member
    class Conference
    class BroadMember
    class BroadMeeting

    Person <|-- Member
    Person <|-- Conference
    Event <|-- Conference
    Event <|-- BroadMeeting
    Member <|-- BroadMember
    Event -- Member
    Person -- Conference
```

The terminal output shows the following commands and results:

```
[master 56a65aa] Se han creado las clases person, member y broadmember y su jerarquia
Delta compression using up to 8 threads
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han relacionado las clases"
[master 045ed81] Se han relacionado las clases
Writing objects: 100% (3/3), 352 bytes | 352.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/sandrasd89/UMLClasesSandra.git
56a65aa..045ed81 master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML>
```

Aquí, he añadido las clases AAUOC y Location, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The code defines the following classes and relationships:

```
classDiagram
    class AAUOC
    class Location
    class Person
    class Event
    class Member
    class Conference
    class BroadMember
    class BroadMeeting

    AAUOC <|-- Location
    Person <|-- Member
    Person <|-- Conference
    Event <|-- Conference
    Event <|-- BroadMeeting
    Member <|-- BroadMember
    Event -- Member
    Person -- Conference
```

The terminal output shows the following commands and results:

```
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han creado las clases aauc y location"
[master 5fbc4d4] Se han creado las clases aauc y location
1 file changed, 6 insertions(+)
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
045ed81..5fbc4d4 master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML>
```

Ahora, he realizado y jerarquizado las clases restantes, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The UML diagram on the right shows a hierarchy where 'AAUOC' is the root, with 'Location' and 'Person' as its children. 'Event' is a child of 'Location', and 'Member' is a child of 'Person'. 'BroadMeeting' is a child of 'Event', and 'Conference' is a child of 'Member'. 'BroadMember' is a child of 'BroadMeeting'.

```
classDiagram
    class AAUOC
    class Location
    class Person
    class Event
    class Member
    class BroadMeeting
    class Conference
    class BroadMember

    AAUOC --> Location
    AAUOC --> Person
    Location --> Event
    Person --> Member
    Event --> BroadMeeting
    Member --> Conference
    BroadMeeting --> BroadMember
```

The code editor shows the following code:

```
class BroadMember {
}

AAUOC o-- Event
AAUOC o-- Location
AAUOC o-- Person
Location -- Event
Event <|-- Conference
Event <|-- BroadMeeting
Person <|-- Member
Member <|-- BroadMember
Event -- Member
Person -- Conference

@enduml
```

The terminal shows the following commands and output:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "Se han relacionado y se ha jerarquizado las clases restantes"
[master 0dfb976] Se han relacionado y se ha jerarquizado las clases restantes
1 file changed, 5 insertions(+), 1 deletion(-)
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
Enumerating objects: 5, done.
```

Aquí, he relacionado la clase BroadMeeting con la clase BroadMember, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The UML diagram on the right shows the same hierarchy as the first commit, but with an additional relationship between 'BroadMeeting' and 'BroadMember'.

```
classDiagram
    class AAUOC
    class Location
    class Person
    class Event
    class Member
    class BroadMeeting
    class Conference
    class BroadMember

    AAUOC --> Location
    AAUOC --> Person
    Location --> Event
    Person --> Member
    Event --> BroadMeeting
    Member --> Conference
    BroadMeeting --> BroadMember
    BroadMember --> BroadMember
```

The code editor shows the following code:

```
class Member{
}

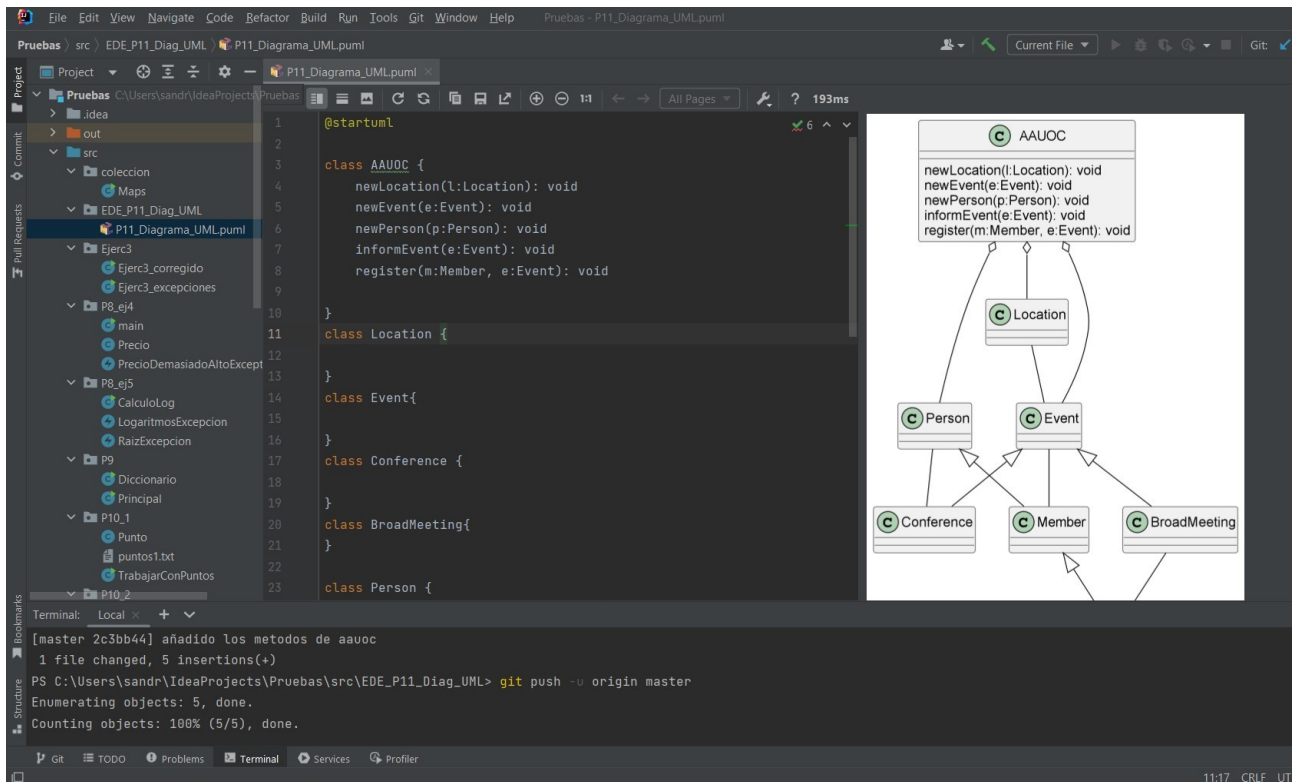
class BroadMember {
}

AAUOC o-- Event
AAUOC o-- Location
AAUOC o-- Person
Location -- Event
Event <|-- Conference
Event <|-- BroadMeeting
Person <|-- Member
Member <|-- BroadMember
Event -- Member
Person -- Conference
BroadMeeting -- BroadMember
BroadMember -- BroadMember
```

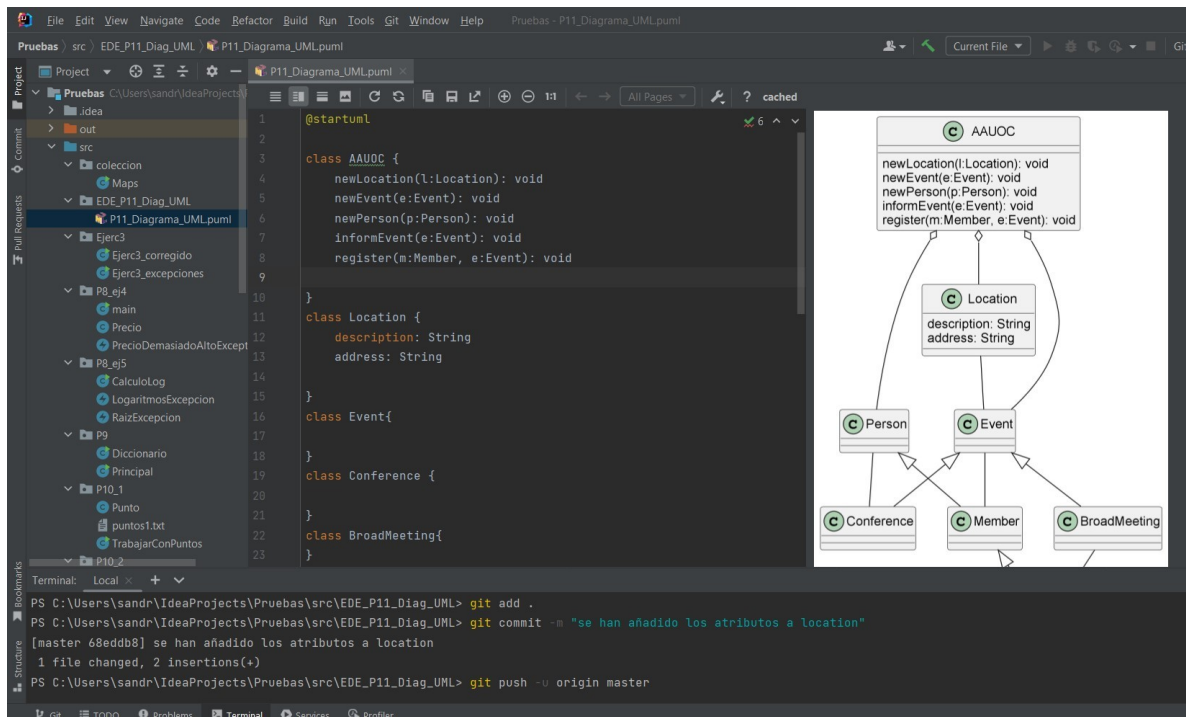
The terminal shows the following commands and output:

```
[master f6bde17] Se ha relacionado broadmeeting con broadmember
1 file changed, 1 insertion(+)
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
```

Ahora, he añadido los métodos a la clase AAUOC, con su correspondiente commit en el repositorio:

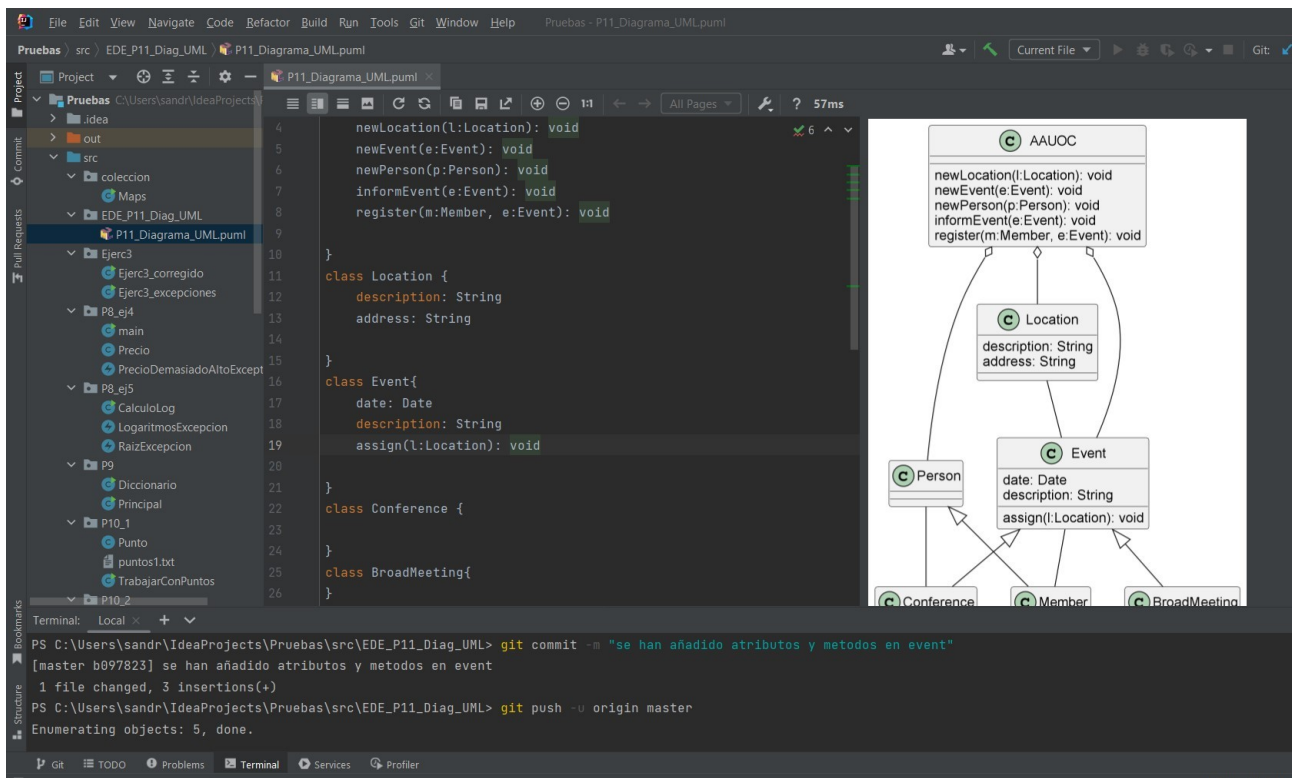


Ahora, he añadido los atributos a la clase Location, con su correspondiente commit en el repositorio:

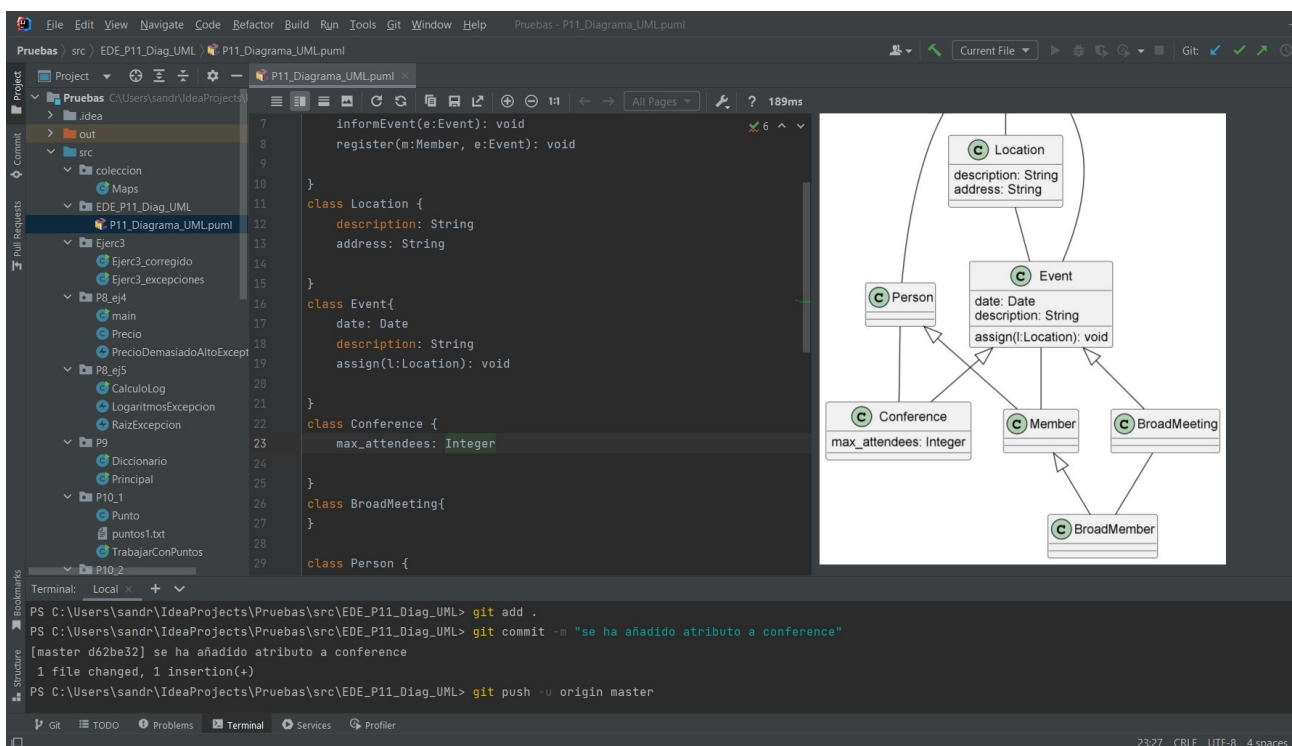




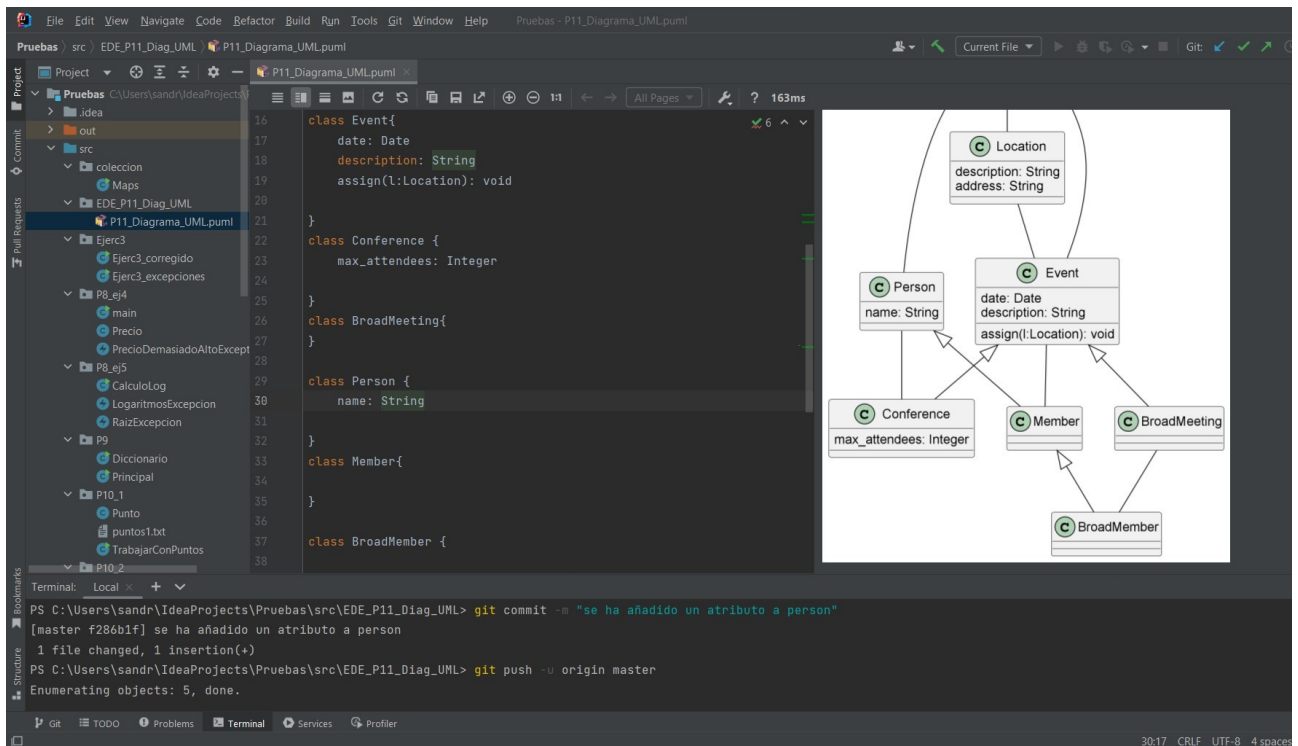
Aquí, he añadido los atributos y métodos a la clase Event, con su correspondiente commit en el repositorio:



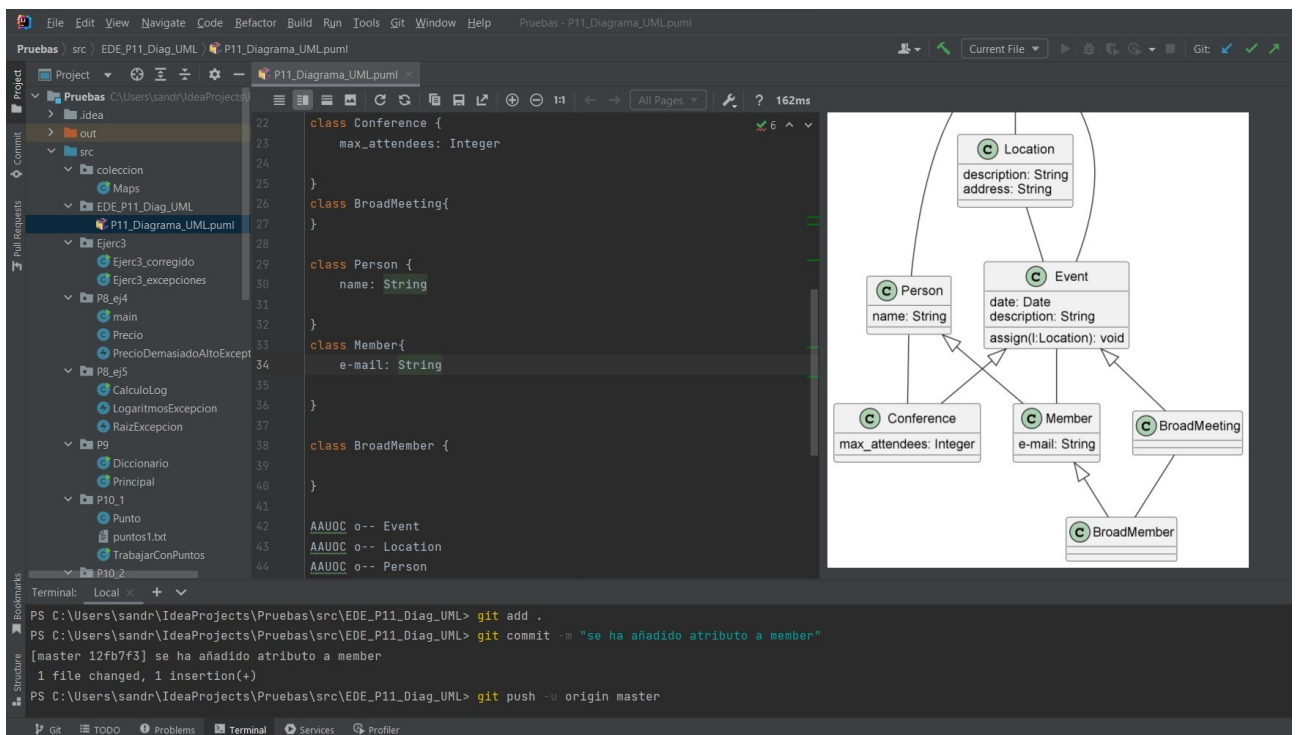
Ahora, he añadido el atributo a la clase Conference, con su correspondiente commit en el repositorio:



Aquí, he añadido el atributo a la clase Person, con su correspondiente commit en el repositorio:



Ahora, he añadido el atributo a la clase Member, con su correspondiente commit en el repositorio:



Ahora, he añadido el atributo a la clase Member, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The code editor displays the following Java code:

```
class Conference {
    max_attendees: Integer
}

class BroadMeeting{
}

class Person {
    name: String
}

class Member{
    e-mail: String
}

class BroadMember {
}

AAUOC o-- Event
AAUOC o-- Location
AAUOC o-- Person
```

The UML diagram on the right shows the classes and their relationships. The 'Member' class now has an 'e-mail' attribute. The diagram includes classes: Location, Event, Person, Conference, Member, BroadMeeting, and BroadMember. Relationships are shown with solid lines and open arrows.

The terminal at the bottom shows the following commands and output:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "se ha añadido atributo a member"
[master 12fb7f3] se ha añadido atributo a member
1 file changed, 1 insertion(+)
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
```

Ahora, he añadido información a las relaciones existentes entre las clases, con su correspondiente commit en el repositorio:

The screenshot shows the IntelliJ IDEA interface with the 'P11\_Diagrama\_UML.puml' file open. The code editor displays the following Java code:

```
class Member{
    e-mail: String
}

class BroadMember {
}

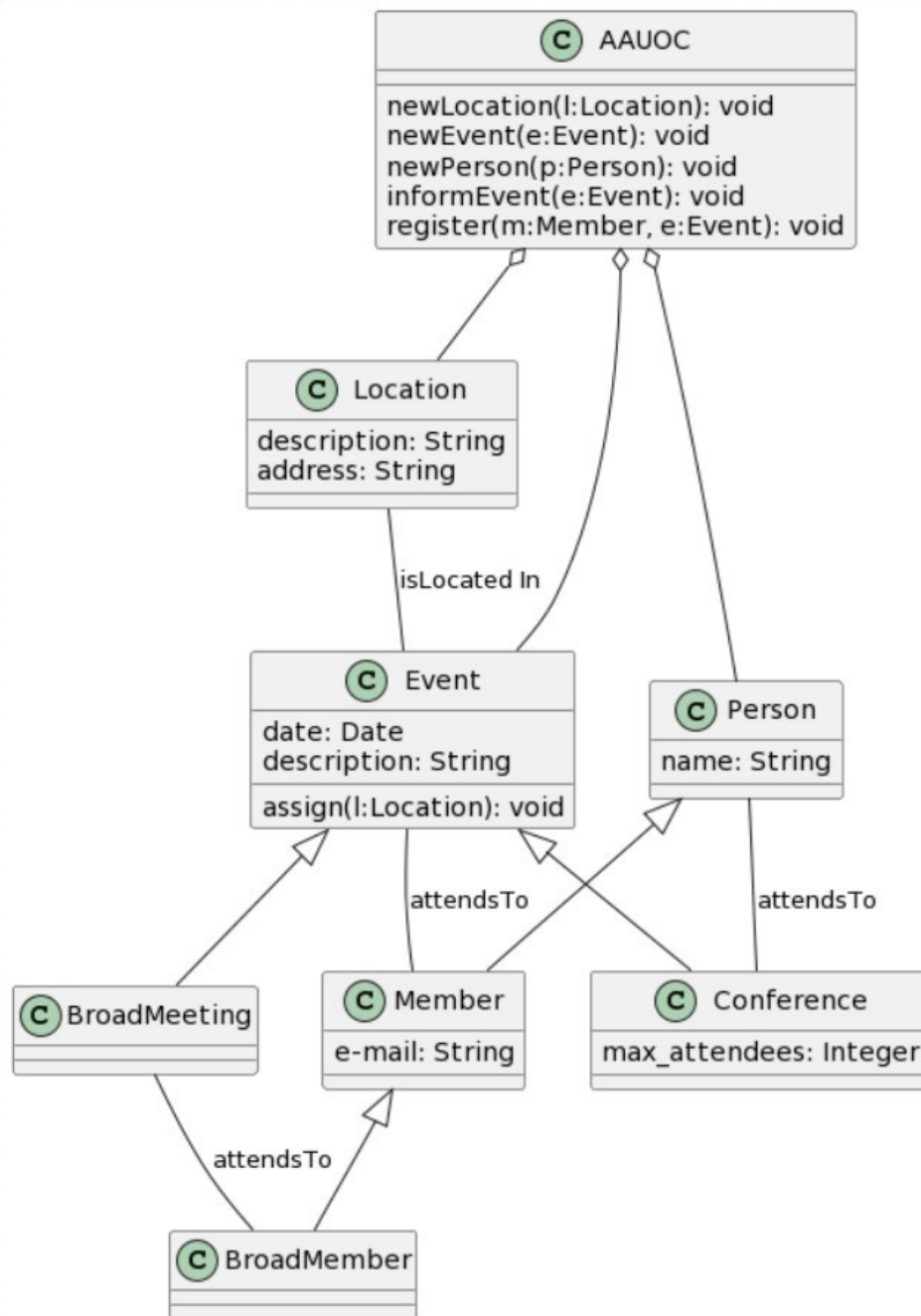
AAUOC o-- Event
AAUOC o-- Location
AAUOC o-- Person
Location -- Event : isLocated In
Event <|-- Conference
Event <|-- BroadMeeting
Person <|-- Member
Member <|-- BroadMember
Event -- Member : attendsTo
Person -- Conference : attendsTo
BroadMeeting -- BroadMember : attendsTo
```

The UML diagram on the right shows the classes and their relationships. The 'Member' class now has an 'e-mail' attribute. The diagram includes classes: Location, Event, Person, Conference, Member, BroadMeeting, and BroadMember. Relationships are shown with solid lines and open arrows. The 'Event' class has a 'date' attribute and an 'assign(!:Location): void' method. The 'Person' class has a 'name' attribute. The 'Conference' class has a 'max\_attendees' attribute. The 'Member' class has an 'e-mail' attribute. The 'BroadMeeting' class has a 'max\_attendees' attribute. The 'BroadMember' class has an 'e-mail' attribute. The relationships are: 'Location' is located in 'Event' (isLocated In), 'Event' is a generalization of 'Conference' and 'BroadMeeting' (Event <|-- Conference, Event <|-- BroadMeeting), 'Person' is a generalization of 'Member' and 'BroadMember' (Person <|-- Member, Person <|-- BroadMember), 'Event' is attended to by 'Member' (Event -- Member : attendsTo), 'Person' is attended to by 'Conference' (Person -- Conference : attendsTo), and 'BroadMeeting' is attended to by 'BroadMember' (BroadMeeting -- BroadMember : attendsTo).

The terminal at the bottom shows the following commands and output:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "se ha añadido informacion en las cardinalidades"
[master 68e0cad] se ha añadido informacion en las cardinalidades
1 file changed, 4 insertions(+), 4 deletions(-)
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
Enumerating objects: 5, done.
```

Aquí, una captura de las clases, atributos y métodos del diagrama requerido:



Finalmente, he añadido las cardinalidades existentes entre las clases citadas, con su correspondiente commit en el repositorio:

The screenshot displays an IDE interface with the following components:

- Project Explorer:** Shows a project structure with folders like 'src', 'out', 'coleccion', and 'Maps'. The file 'P11\_Diagrama\_UML.puml' is selected.
- Code Editor:** Contains UML class definitions and relationships:

```
class BroadMember {  
    ...  
}  
  
hide members  
AAUOC o-- "0..*" Event  
AAUOC o-- "0..*" Location  
AAUOC o-- "0..*" Person  
Location "1" -- "0..*" Event : isLocated In  
Event <|-- Conference  
Event <|-- BroadMeeting  
Person <|-- Member  
Member <|-- BroadMember  
Event "0..*" -- "0..*" Member : attendsTo  
Person "0..*" -- "0..*" Conference : attendsTo  
BroadMeeting "0..*" -- "0..*" BroadMember : attendsTo  
  
@enduml
```
- UML Diagram:** A visual representation of the code, showing classes AAUOC, Location, Event, Person, BroadMeeting, Member, and Conference. Relationships include 'isLocated In' between Location and Event, and 'attendsTo' between Event/Person and their subclasses.
- Terminal:** Shows the execution of git commands:

```
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git add .  
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git commit -m "se han añadido las cardinalidades"  
[master bed4851] se han añadido las cardinalidades  
1 file changed, 8 insertions(+), 7 deletions(-)  
PS C:\Users\sandr\IdeaProjects\Pruebas\src\EDE_P11_Diag_UML> git push -u origin master
```