Project requirements

1.Description of the system

The system allows the sharing of works and portfolio between creators and companies, therefore allowing them to get in touch through job advertisements. The users of the system are: companies and content creators (like concept artists, 3D Modelers, etc).
In the sign-up phase, the content creators, as well as companies, select the type of profile and fill the required field. Therefore, the content creator selects the type of profile “content creator” and the company selects the type of profile “company”.
The creation of an account by a content creator implies the creation, by the system, of the portfolio which will contain the user’s creations that will be posted on the system through a post. When creating a post, among the different fields, the user inserts tags that specify the area of interest of that post and a textual area as a description of its work. The portfolio, with its contents, will be accessible by the user in the portfolio section where he can modify it.
The system allows the company to create posts with a job advertisement. Among the fields, the post will contain tags of the area of interest of that job, the specifications of the job proposal, eventually some brief description of the job, like its name, and the location of the job. After the creation of the job, it will be shown to the company the users’ profiles that best match the advertisement. The matching is based on the correlation between the work tags in users’ portfolios and the job tags.
The content creator can apply to a job advertisement and the list of all his applications will be shown in his profile section together with the applications that have been accepted or refused. The companies will then access the list of the users applied to their proposal in its profile section, and eventually access their portfolios. In case the company is interested in the user's portfolio, the company will have the possibility to approve the application, otherwise it will be rejected. If the application is approved, the company will have the possibility to send to the user information about an external meeting and contact information for external communications (i.e changes in the meeting dates). Whenever the company provides feedback about the proposal or visits the user’s portfolio, a notification will be sent to the content creator that has applied to the job.
Additionally the system provides a homepage where the user can view the posts created by the other users, having the possibility to filter them in some ways, such as: chronological order, by tags, etc... Moreover there will be shown a “Job” section with the job advertisement that the user can filter according to its interests, and a “Search” bar to search creators or companies. Companies can access the same contents in the homepage, except the “Job” section that will not be displayed for them.

2.Users of the system and their interactions

The users of the system are:

- Content creators such as concept artists or artists in general, as well as 3D modelers, 2D modelers.
- Companies that are interested in findings some specific working figures

The user's interaction are the following:

- Creation of an account or sign-up: the company and the content creators can create their account by selecting what type of user they are (i.e creator or company) and then filling the required fields. For the content creators, at the moment of creation of their account, on their profile the system will create a Portfolio that will contain all their creations.
- Log-in into the system: the user can log-in into the system inserting the email and password.
- Creation of a post with a Creation: the content creator can create a post with its creation. So he will insert the required fields and publish the content. The created content will be added automatically to its Portfolio where he can eventually modify or delete its creation.
- Creation of a Job Advertisement and visualization of the suggested applications: the company creates a post with the job advertisement filling the required fields. The created job proposals will be accessible in the company profile, where the company can eventually modify or retire them.
  When publishing a job advertisement, it will be shown a list of most related users for that job that the company can contact. For each user's profile the company can: visualize their portfolio and, eventually, contact them specifying the details for a meeting together with the link for the meet. Additionally the company adds contact information for external communications.
  The created advertisements will be available in the profile section of the company where the company can access, for each job advertisement, the list of the applications. For each application the company will have two choices: visit the user's portfolio and accept/reject the proposal. In case of acceptance it will be displayed a message box where the company can insert the details for a meeting, together with the link for the meet, and contact information for further communications. Whenever the company visits the user's portfolio a notification will be shown to the content creator. Moreover, if the company accepts/rejects the proposal and sends the meeting and contact information, the content creator will receive a notification as well.
- Apply to a job advertisement: the content creator can apply to a job advertisement. The list of all applied job advertisements will be available in his profile, where he can, eventually, revoke its application.
- Search for a user's profile: both companies and content creators can search for the user's profile, entering the company's name or the user's name.
- Navigate the Job section: the user can browse the job advertisements, eventually, filtering them by: latest, popularity (the job proposal with most applications).
- Navigate the Home section: the user can browse the posts shown in its home, eventually, filtering them by: chronological order, tags, etc.
- Log out

3.Use cases

Use case: create an account or sign-up
Actor: content creator, company
Scenario: the user creates its own account by selecting the type of user, i.e content creator or company, then filling the required fields for the registration. After creating the content creator's account, the system will automatically create his Portfolio.

Use-case: log in
Actor: content creator, company
Scenario: the user logs in into the system inserting email and password.

Use case: create a post with the creation
Actor: content creator
Flow/scenario: the user starts the creation of a post. The user fills the fields of the post, selects the tags of the post, inserts its work and creates the post. The created content will be automatically added to the portfolio.

Use case: search for user
Actor: content creator, company
Scenario: the user inserts the user's name of interest and starts the research.

Use case: visualize user's profile
Actor: content creator, company
Scenario: The user selects and accesses profiles of interest

Use case: browse the posts in home
Actors: company, content creator
Scenario: the user browses the posts that are displayed in the homepage.

Use case: filter the posts
Actors: company, content creator
Scenario: the user filters the posts according to the filters.

Use case: visualize a post
Actors: company, content creator
Scenario: the user clicks on the post of interest over the ones showed in his home

Use case: browse the Job section
Actors: content creator
Scenario: the content creator accesses the Job section and browses the job advertisements.

Use case: filter the Job advertisements
Actors: content creator
Scenario: the content creator can filter the job advertisement by: latest, popularity.

Use case: create/post a job advertisement
Actor: company
Scenario: the company creates the job advertisement by filling the required fields. At the end of the creation, the company will receive suggested portfolios based on the matching between the tags of the job and the tags of the works in the creators' portfolio. If a creator's portfolio is interesting, then the company can visualize its portfolio and contact him directly by sending him the meeting information, the meeting link and contact information.

Use case: apply to a job advertisement
Actor: content creator
Scenario: the content creator accesses the job advertisement and it will be shown to him the possibility to apply for that job. The content creator can later access the list of all his applications in his profile and eventually dismiss an application.

Use case: visualize applications for a job advertisement in company's profile
Actors: company
Scenario: the company can access the list of applications for its job advertisements in its profile section, where, for each content creator shown in the list of applications, the company can eventually visit the content creator's portfolio, accept/reject his proposal and, in case of acceptance, send him meeting information and contact information.

Use case: visualize list of applied job advertisement in content creator's profile
Actors: content creator
Scenario: the content creator can access the list of all the job advertisements to which he has applied, and eventually retire a proposal.

Use case: visualize the content creators' portfolios
Actors: company
Scenario: the company can visualize the user's portfolios that are suggested after the creation of a job advertisement or that are displayed in the list associated with a job advertisement.

Use case: sending meeting and contact informations to candidates
Actor: company
Scenario: the company can access the list of all applications to its job advertisement. For each application the company will have the possibility to accept it or refuse it. In case of acceptance, the company will have the possibility to send to the user information for an external meeting together with contact information.

Use case: modify or delete a creation
Actors: content creator
Scenario: after the post creation, the content creator has the possibility to interact again with the post, in his portfolio section, to modify some of its fields or to delete the content.

Use case: modify or delete a job advertisement
Actors: company
Scenario: after the job advertisement creation, the company has the possibility to interact again with the post, in his profile section, to modify or delete some of its fields.

Use case: log out
Actors: content creator, company
Scenario: the user clicks on the icon to log out from the system and he’s redirected to the log-in/sign-up

4.Database

4.1.Users

The entity “Users” and its two subclasses contain the users’ information. The entity “Users” group all the common characteristics of the two users’ categories, such as: ID, name, email, password (to improve the security, the password will be encrypted using a hashing function). Since content creators and companies define the entire users’ set, they are disjoint and complete. As regards for the fields of each table, we have:

- Content Creator: username (the one on the website), job figure that specifies its working figure (i.e concept artist), tools that are the programs used to create the content or, generally, the programs preferred by the user (i.e photoshop, Unreal Engine, Unity, etc)
- Company: the VAT number that uniquely identifies the company, location so where the company is located.

Since Content Creator and Company are two entities that are disjoint and complete, they will be implemented as two tables with the fields listed above, i.e the fields of a table will include the ones in common (the “Users” fields) and the ones that are specific to each entity.

4.2.Post

The entity “Post” and its two subclasses contain the post information. The entity Post groups the common attributes that are: ID, description (i.e description of the post like a comment on its content), title, publishing date. Since the Creations and the Job Advertisement together form the Post set, the two subclasses are disjoint and complete. The additional attributes of the two subclasses are the following:

- Creation: Portfolio_ID to which the creations refers to, external_host_link (i.e imgur)
- Job Advertisement: User_ID to which the advertising refers to, type_of_job that is the working figure required, Location of the job.

Since Creation and Job Advertisement are two entities that are disjoint and complete, they will be implemented as two tables with the fields listed above, i.e the fields of a table will include the ones in common (the “Post” fields) and the ones that are specific to each entity.

4.3.Portfolio

The entity Portfolio has the following attributes: Portfolio_ID, the User_ID to which it is associated.

4.4.Application

The entity “Application” is used to model the fact that a Creator can apply to 0 to n Job Advertisement and a Job Advertisement can be applied by 0 to n Content Creator. So an intermediate entity, then a table, has been added that is “Application”. Its attributes are: Application_ID, User_ID and Job_Advertisement_ID to keep track of the application submitted to each job and by each creator, date of submission of the proposal. PortfolioViewed which, if true, tells if the company has visualized the user portfolio.

Response which is an integer, not NULL, with three possible values: 0,1,2. The value 0 means that the company neither has accepted nor has rejected the application yet; the value 0 is the default value. The value 1 means that the company has accepted the proposal and the value 2 means that the company has rejected the proposal.
Notification, if true, tells us that the user has a notification for a job advertisement to which he has applied, which means that the company has accepted or rejected the proposal.

4.5.Message

The entity “Message” models the dynamic in which, if the company accepts the proposal of a Creator, the company will have the possibility to send him a message with contact and meeting information. The Message Entity, so the table, has attributes: Message_ID, Application_ID to which it refers to, message_text (i.e contact information, brief description with the day and hour of the meeting), meeting_link (i.e Google Meet link, Zoom link).

4.6.Association

The entity “Association” models a similar dynamic that is modeled by the entity “Application” where we have two entities having relationship with multiplicity 0..n on both sides. More specifically, this time we are modeling the fact that a post can have multiple tags and each tag can be associated with multiple posts. The attributes are: Association_ID that uniquely identifies the association, post_ID and tag_ID that we are considering.

4.7.Tag

The entity “Tag” has attributes: Tag_ID that uniquely identifies the tag, name of the tag.

5.Relationships

As regards for the relations:

- the Company can publish 0 to n Job Advertisement and *that* published Job Advertisement is published (or related) to one and only Company.
- The Content Creator can create one and only Portfolio and a Portfolio is related only to a specific creator. The Portfolio can contain 0 to n creations, and a creation is contained in only one Portfolio. The relation that involves Content Creator and Portfolio is used to model the fact that when the user creates its account, the website automatically creates a Portfolio associated with the user.
  The Content Creator can generate 0 to n Creations and each Creation is related to only one Content Creator.
  The Content Creator can apply 0 to n applications, and each application is associated to a single Creator. Besides, an application is related to a specific job and a job can have 0 to n applications.
- The Application can be linked to 0 or 1 message and the message is associated to one and only application. This relationship helps us to model the fact that, if the company accepts a proposal it can send a message to the user, and, if it sends the message, it will contain information about a meeting and contact information to allow external communications.
- The Post can be associated to 0 up to n association (meaning that the post will contain multiple tags), and each association is specific for a post. Besides, an association can be related to 0 to n tags, and the given tag will be linked to a single association.

6.Technological requirements

6.1.Client side

For the client side the expected technologies are: HTML 5 and CSS 4.15 for the creation and styling of the website, javascript ES6 for animations and the creation of some specific tools. AJAX for the form validation. For the styling of the website it is expected to use a Framework that still needs to be determined, probably Bootstrap.

6.2.Server side

For the server side the expected technologies are: MySQL 8.0 for managing the database; SQL, PHP 8.1 for retrieving the information from the database; for the server it is used Apache both online and local. Additionally local Apache will be used together with XAMPP 8.1.2.

6.3 Supported Browsers

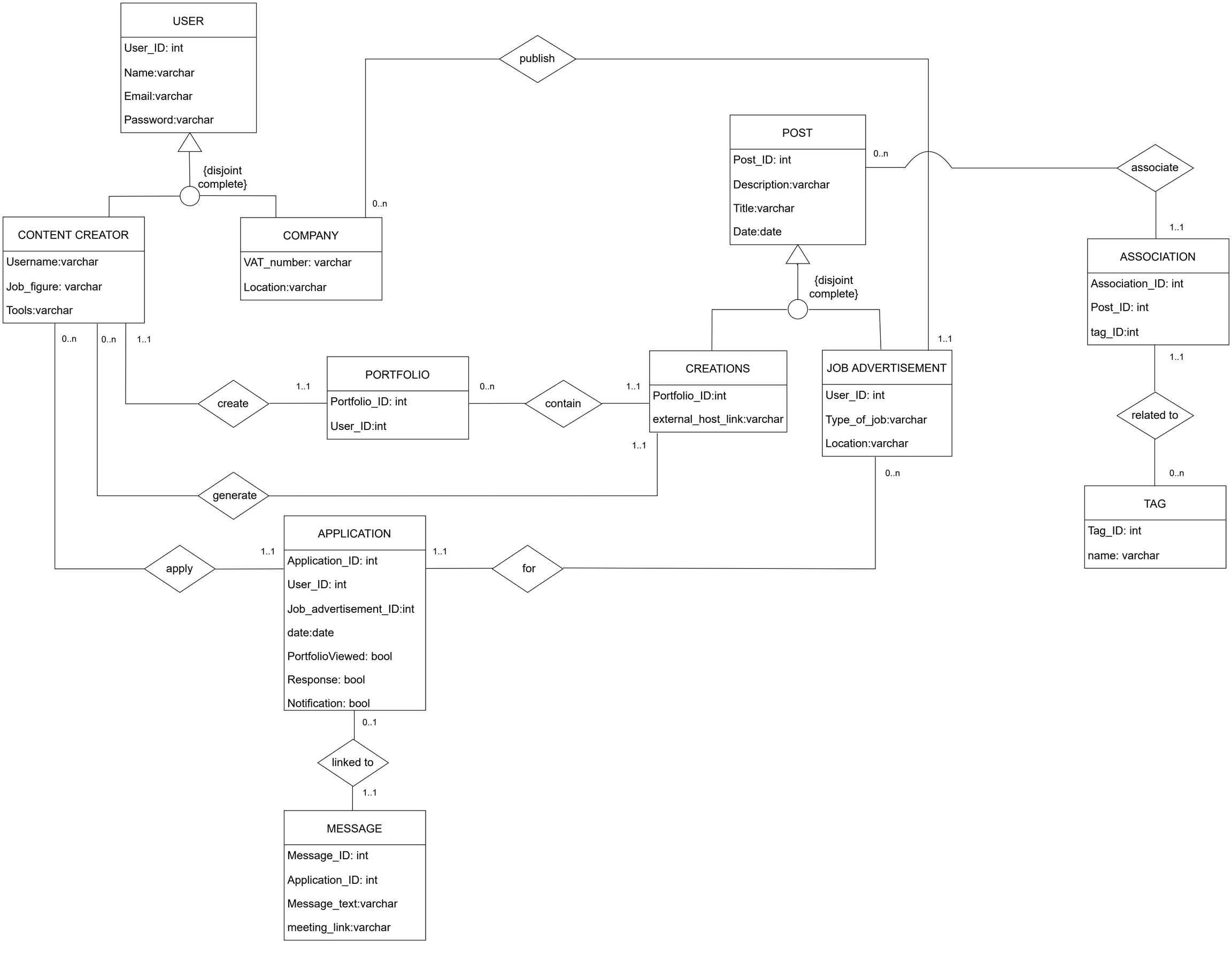
Chrome and, eventually, Firefox after implementing the entire project for the visualization on Chrome.

7.Timetable

- Week: 7/03 up to 14/03. Creation of the database offline (at least 5/6 hours). Set up the environment(3/4 hours).
- Week: 14/03 up to 21/03. Creation of the HTML pages (at least 4/5 hours for each page). Implementation of some basic functionalities of the website (at least 5/6 hours for each functionality).
- Week: 21/03 up to 28/03. Implementation of more advanced functionalities such as the suggestion of the users' portfolios when a company creates a job advertisement (at least 6/7 hours for each functionality).
- Week: 28/03 up to 04/04. Implementation of the framework and styling of the website (at least 10 hours).
- Week: 04/04 up to 11/04. Refinement of some website parts and implementation of security policies for the beta presentation(at least 4/5 hours)
- Week: 11/04 up to 18/04. Online hosting of the project (at least 5/6 hours).
- Week: 18/04 up to 25/04. Fixing problems related to the online hosting of the project(at least 4/5 hours).
- Week: 25/04 up to 02/05. Fixing website appearance in different browsers (Chrome, Firefox. At least 4 hours).
- Week: 02/05 up to 8/05. Final refinements of the project parts (at least 5/6 hours).

8.Future works

The website can be expanded by introducing a marketplace section where experts can post their courses on specific topics and that can be bought by content creators. This implies the creation of a new section in the user's profile that shows the acquired courses and at which step they are in the learning process of that course. It also implies the implementation of a secure way to buy courses.
An addition to the website could be the News section, where the user can find academic articles, published by experts, about specific topics of research or tools. Eventually the users will have the possibility to add articles of interest to the library section in his profile, where he will be able to retrieve, over the saved articles, the one to be studied.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COMPANY
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ASSOCIATION
Association_ID: int
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generate
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Response: bool
Notification: bool
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linked to
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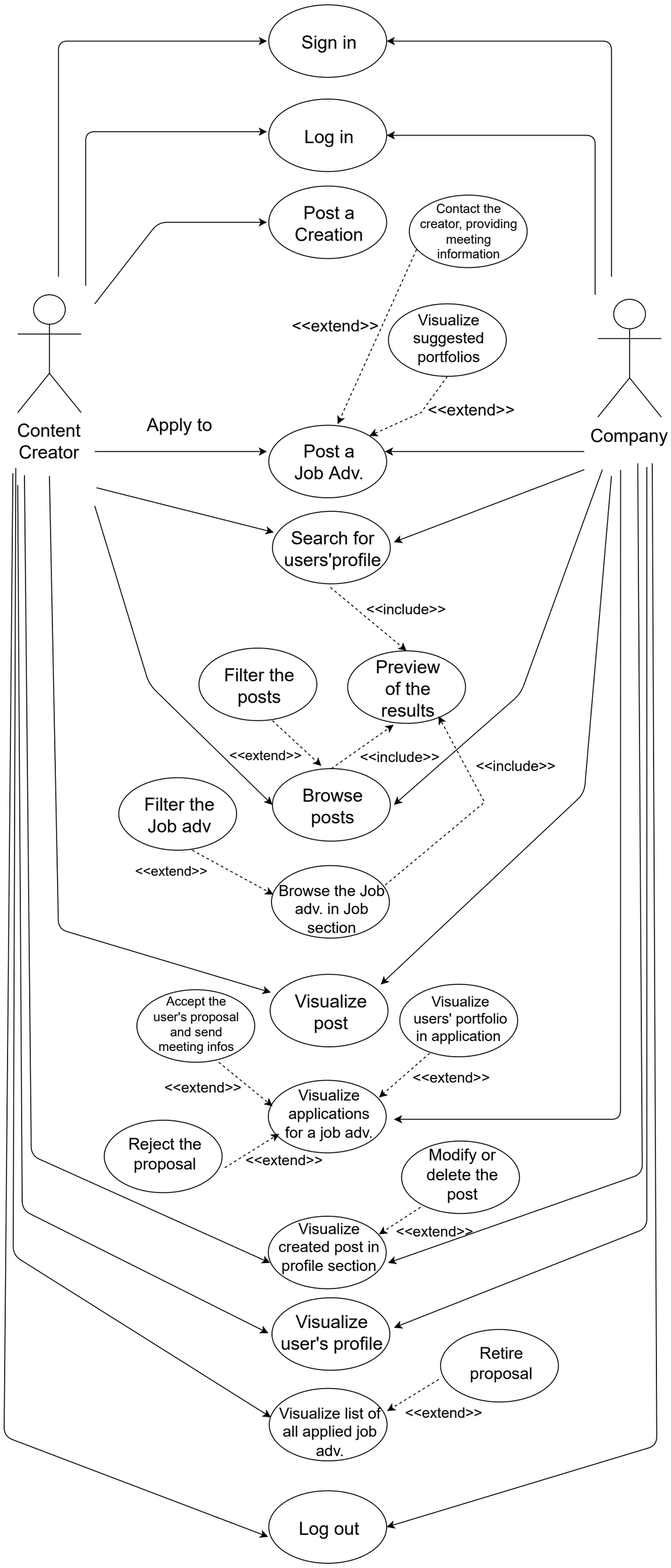
Sign in
Log in
Post a Creation
Contact the creator, providing meeting information
<<extend>>
Visualize suggested portfolios
<<extend>>
Content Creator
Apply to
Post a Job Adv.
Company
Search for users'profile
<<include>>
Filter the posts
Preview of the results
<<extend>>
<<include>>
<<include>>
Filter the Job adv
Browse posts
<<extend>>
Browse the Job adv. in Job section
Visualize post
Accept the user's proposal and send meeting infos
Visualize users' portfolio in application
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<<extend>>
Visualize applications for a job adv.
Reject the proposal
<<extend>>
Modify or delete the post
Visualize created post in profile section
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Visualize user's profile
Retire proposal
Visualize list of all applied job adv.
<<extend>>
Log out