Evidence for Analysis and Design Unit.

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A.D.1 Use case Diagram

Munro bagging app

Record bagged munros

View a list of one's hikes and basic stats

Edit munro records

Tourist companies

View numbers of hikes for individual munros

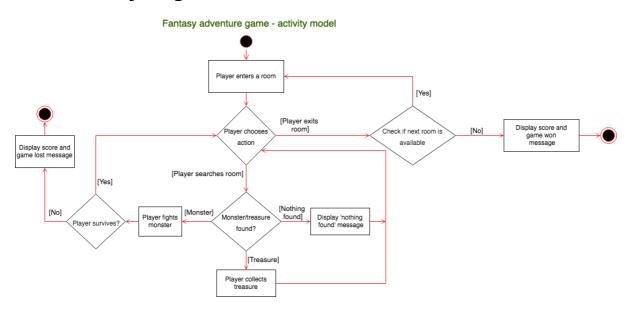
A.D.2 Class diagram

Munro explorer			
Hiker	□ Munro	Hike	
id: Integer first_name: String last_name: String age: Integer munro_goal: Integer	id: Integer name: String region: String altitude: Integer	id: Integer hiker_id: Integer munro_id: Integer date: Date	
save() Hiker.all() update() delete() Hiker.delete_all() find_by_id(Integer)	.save() .Munro.all() .update() .delete() Munro.delete_all() .find_by_id(Integer)	.save() Hike.all() .update() .delete() Hike.delete_all() .find_by_id(Integer)	

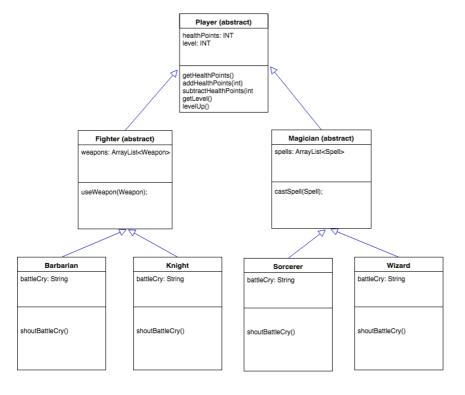
A.D.3 Object diagram



A.D.4 Activity diagram



A.D.5 Inheritance diagram



A.D.6 Implementations Constraints

	Constraint and possible effect	Solution
Hardware and software platforms	The app looks good in the browser on a number of screen sizes, but is overfilled with text on mobile.	Create a simplified layout for mobile devices.
Performance requirements	As the number of records in the app's database grows, it might take more time for pages to load.	Add a visual progress indicator for the user, review SQL queries for possible improvements.
Persistent storage and transactions	Heroku's Postgres plan is limited to 10 000 rows in database – this could become an issue with an increased number of users.	Watch the number of registered users and upgrade the plan if necessary.
Budgets	The app uses Heroku's free Postgres plan, which puts restriction on the database capacity and app usage.	Look for an alternative database service or allocate funds to pay for one of Heroku's paid plans.
Time	The project had to be built in 7 days (including planning, coding and testing), so the functionality is fairly basic and there was little time to implement user feedback.	On the 'About' page, indicate that this is a basic version of the app and invite user comments so that the product can be improved in the future.