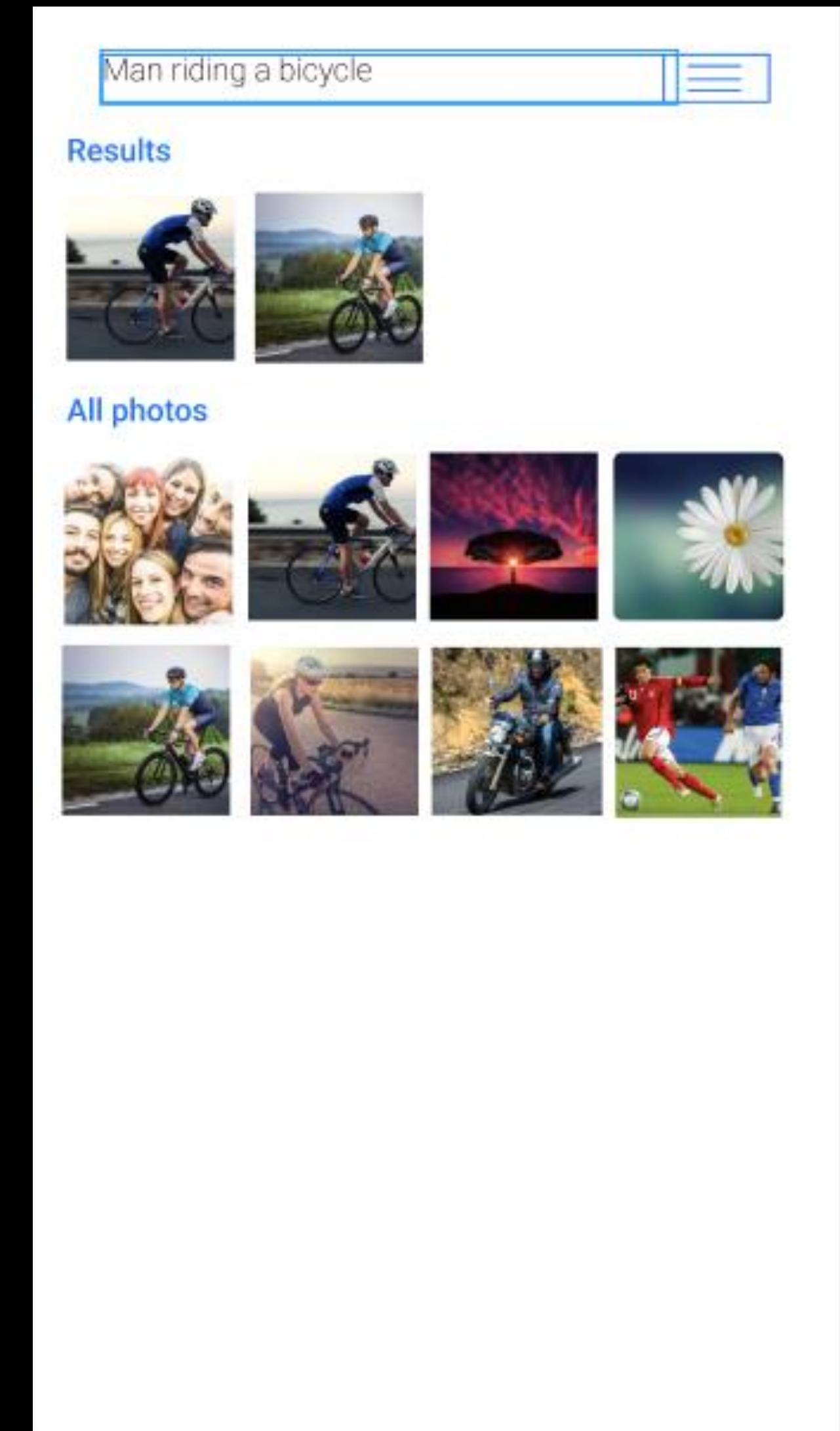


Text based image retrieval system

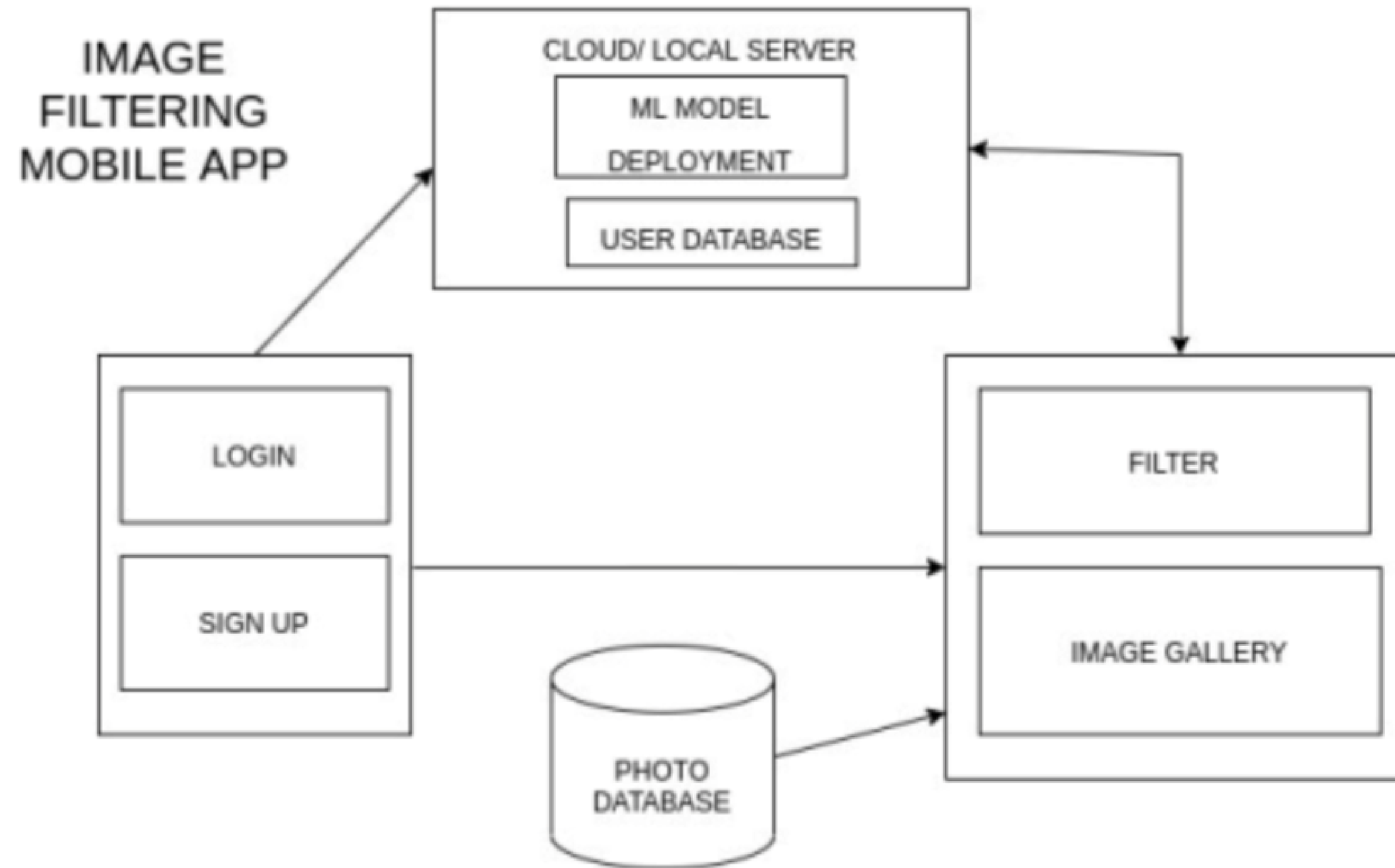
1911001- Aakash Saroop
1911003- Bhairav Narkhede
1911004- Nidhi Bhanushali

General

- Solves the problem of finding the relevant photo from a large amount of photos
- Captions corresponding to each image generated
- Retrieves images with captions closely match the query text.



Architecture



Literature survey

| Research paper title | Approach | Gaps |
|--|--|--|
| ViLBERT | Learns task-agnostic joint representations of image content and natural language | Needs data as MCQs Training data small |
| Composing Text and Image for Image Retrieval | Image retrieval with query as image and text | Works well only for images in controlled environment |
| | | |

How are captions generated?

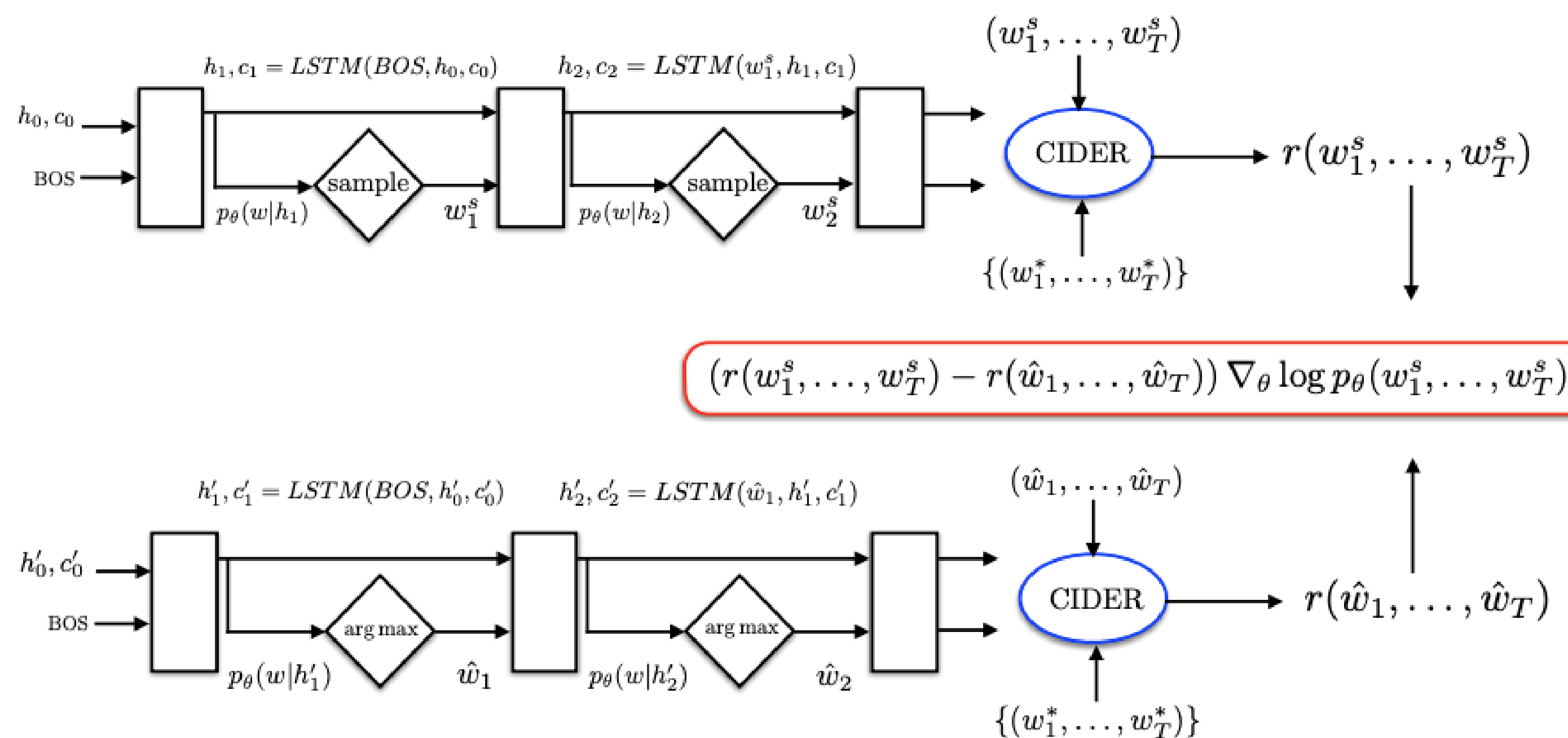


Figure 1: Self-critical sequence training (SCST). The weight put on words of a sampled sentence from the model is determined by the difference between the reward for the sampled sentence and the reward obtained by the estimated sentence under the test-time inference procedure (greedy inference depicted). This harmonizes learning with the inference procedure, and lowers the variance of the gradients, improving the training procedure.

Screenshots of image captioning



a group of people sitting around a table eating cake
a group of people gathered around a table with food
a group of people sitting at a table with plates of food
a group of people sitting at a table with a plate of food
a group of people gathered around a table with food and drink



a woman riding a bike down a dirt road
a woman is riding a bike down a path
a woman riding a bike down a path
a woman is riding a bike down a dirt road
a woman riding a bike on a dirt road



a group of men playing a game of soccer

a group of young men playing a game of soccer

a group of men playing soccer on a field

a group of men playing a soccer game

a group of men are playing soccer on a field



two zebras and a giraffe walking down a road

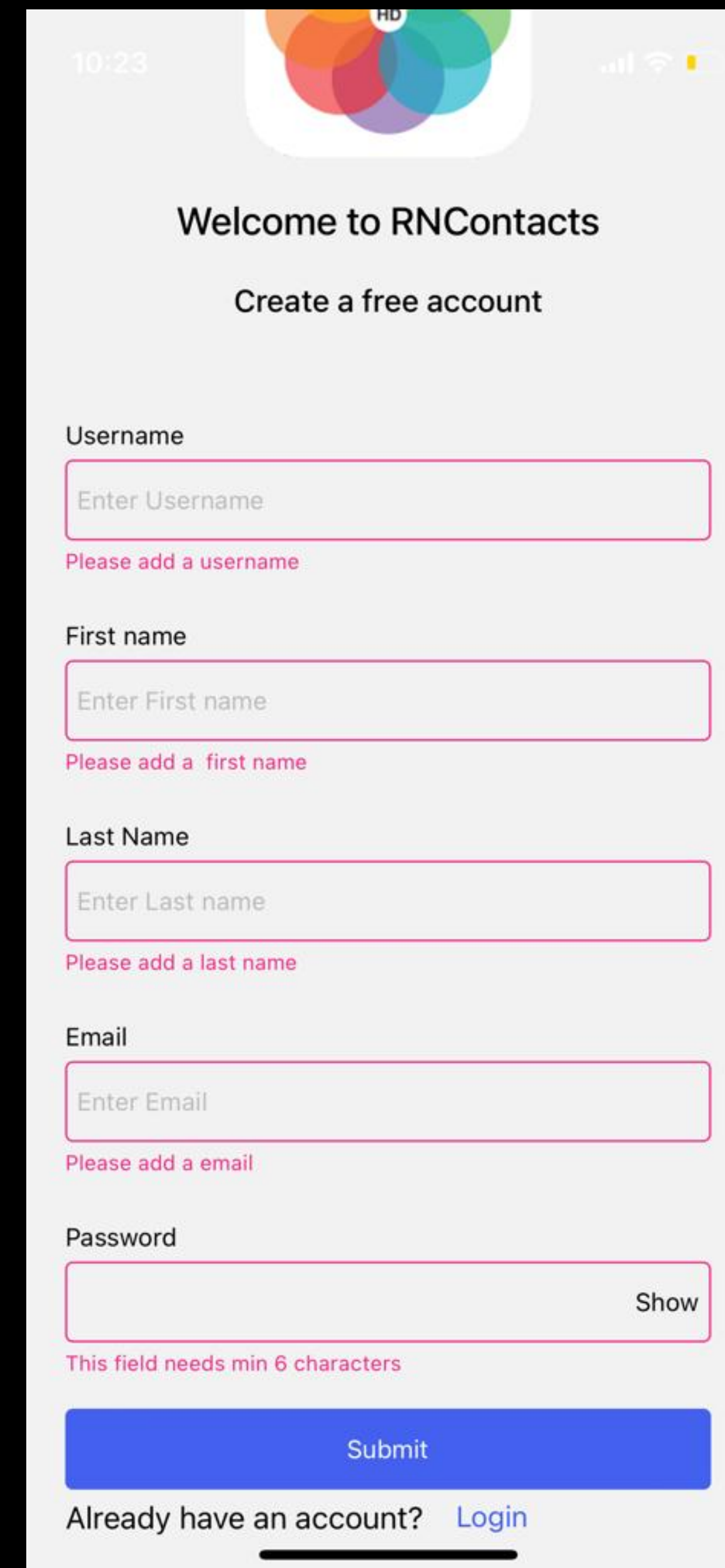
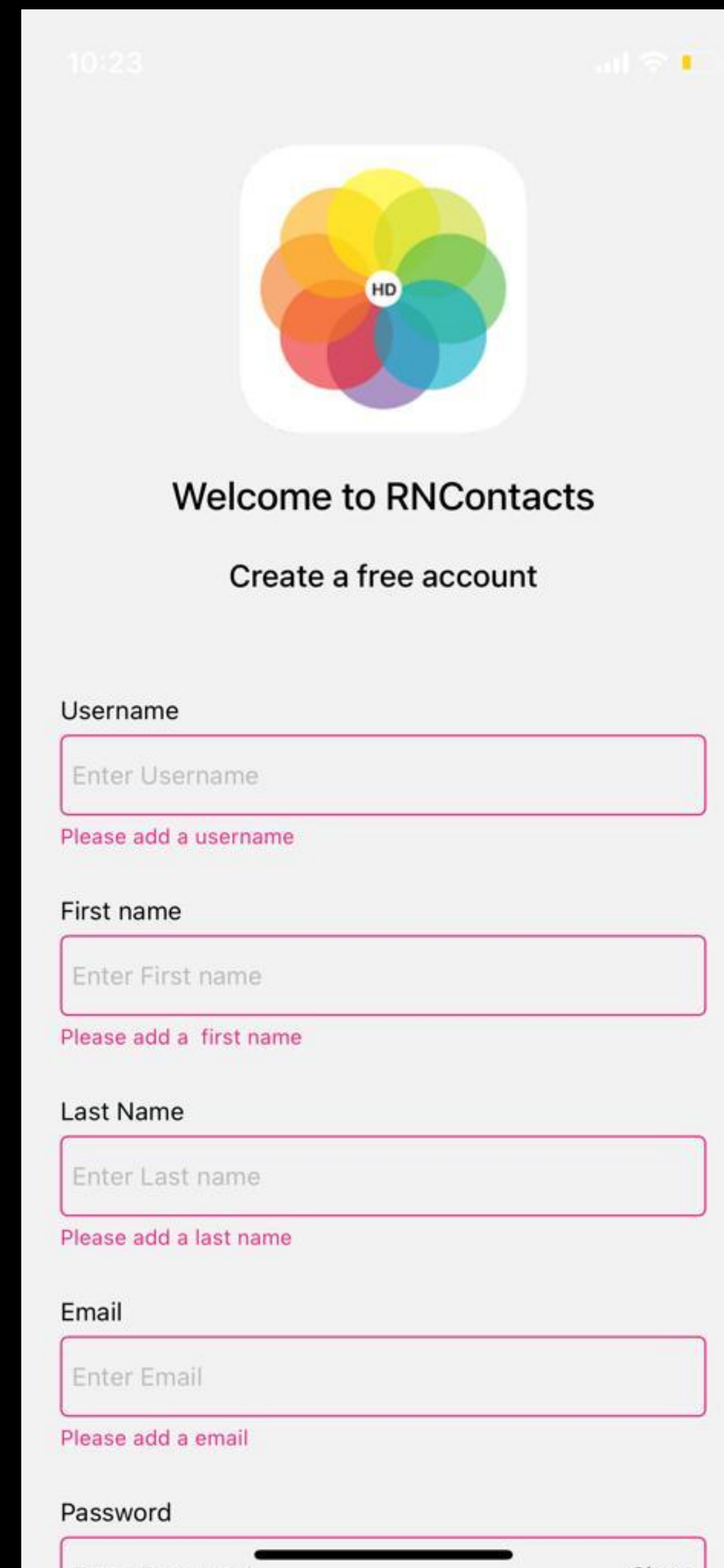
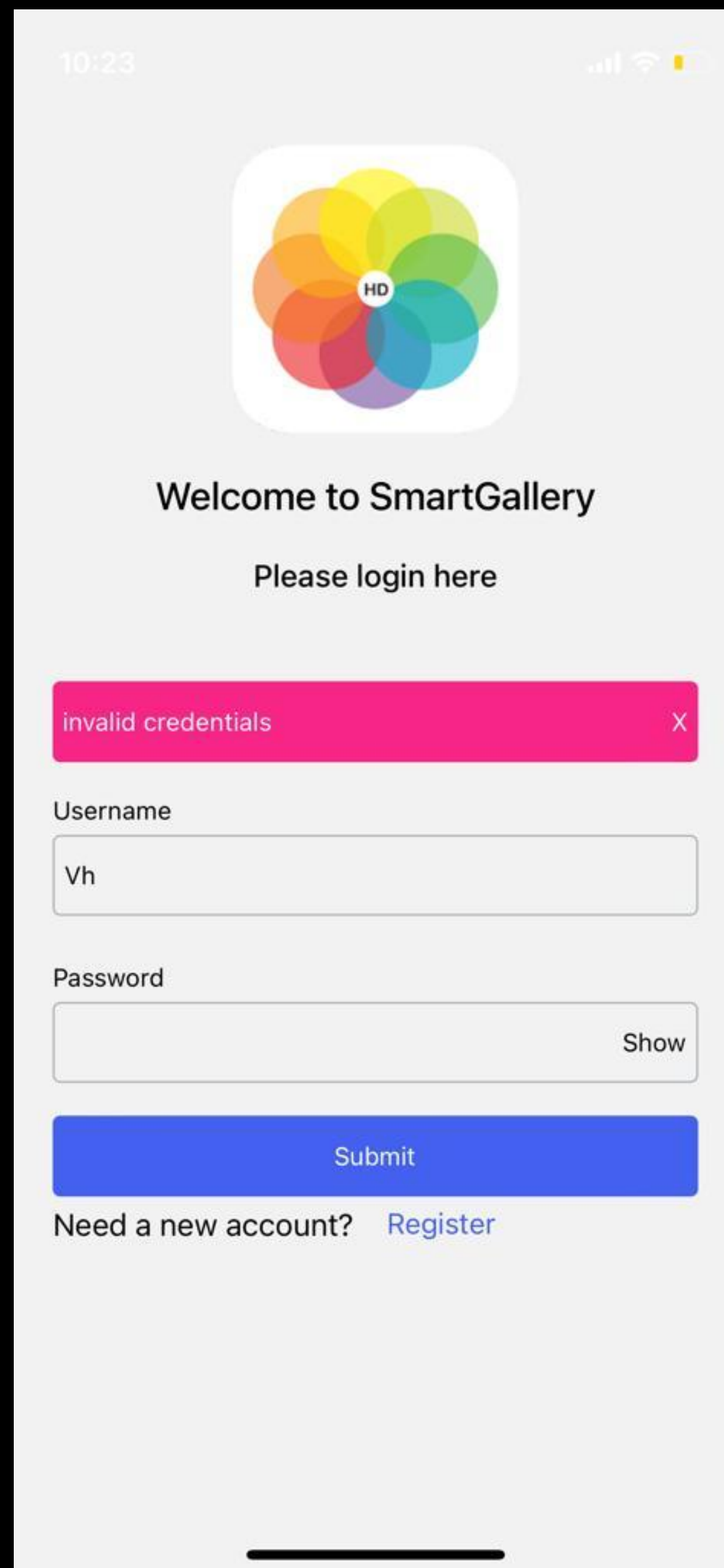
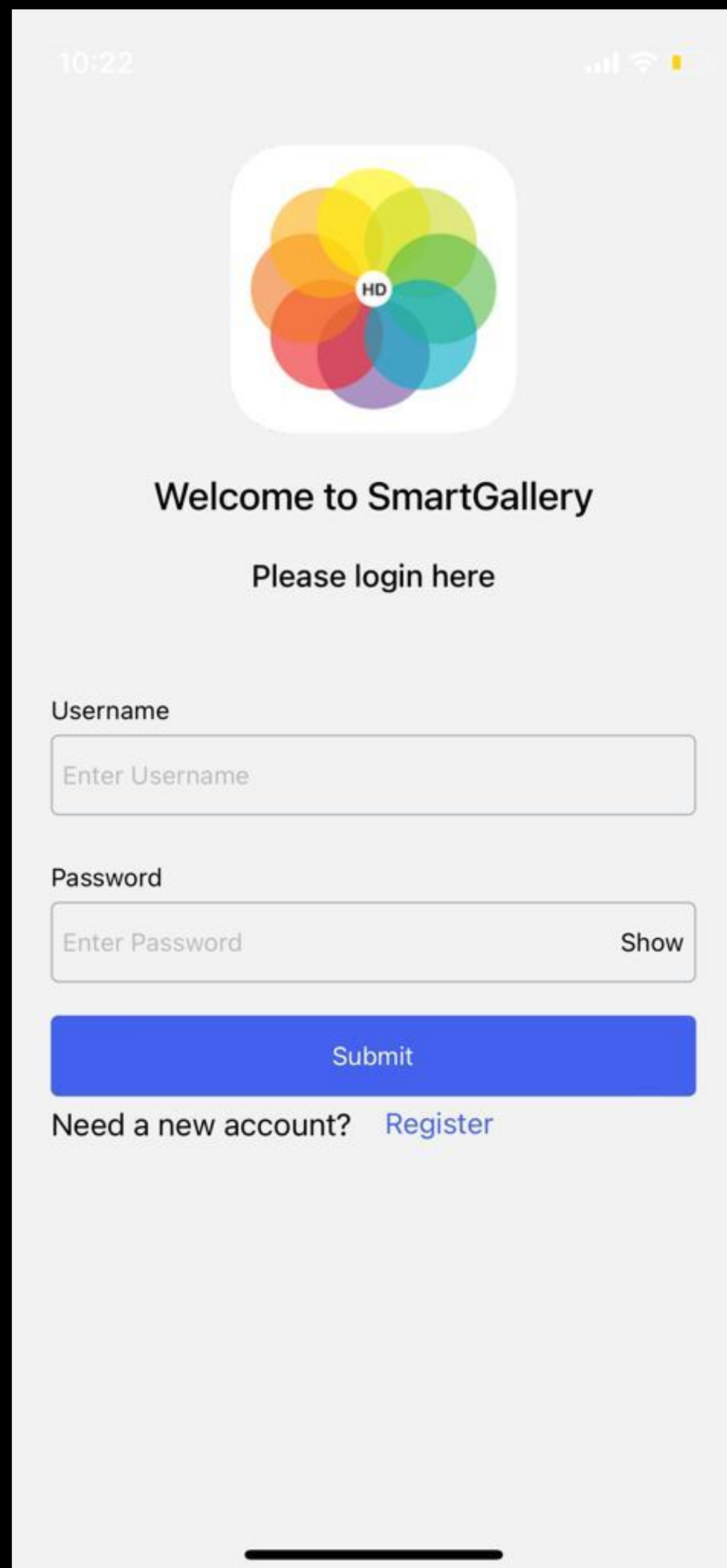
two zebras and a giraffe walk down a road

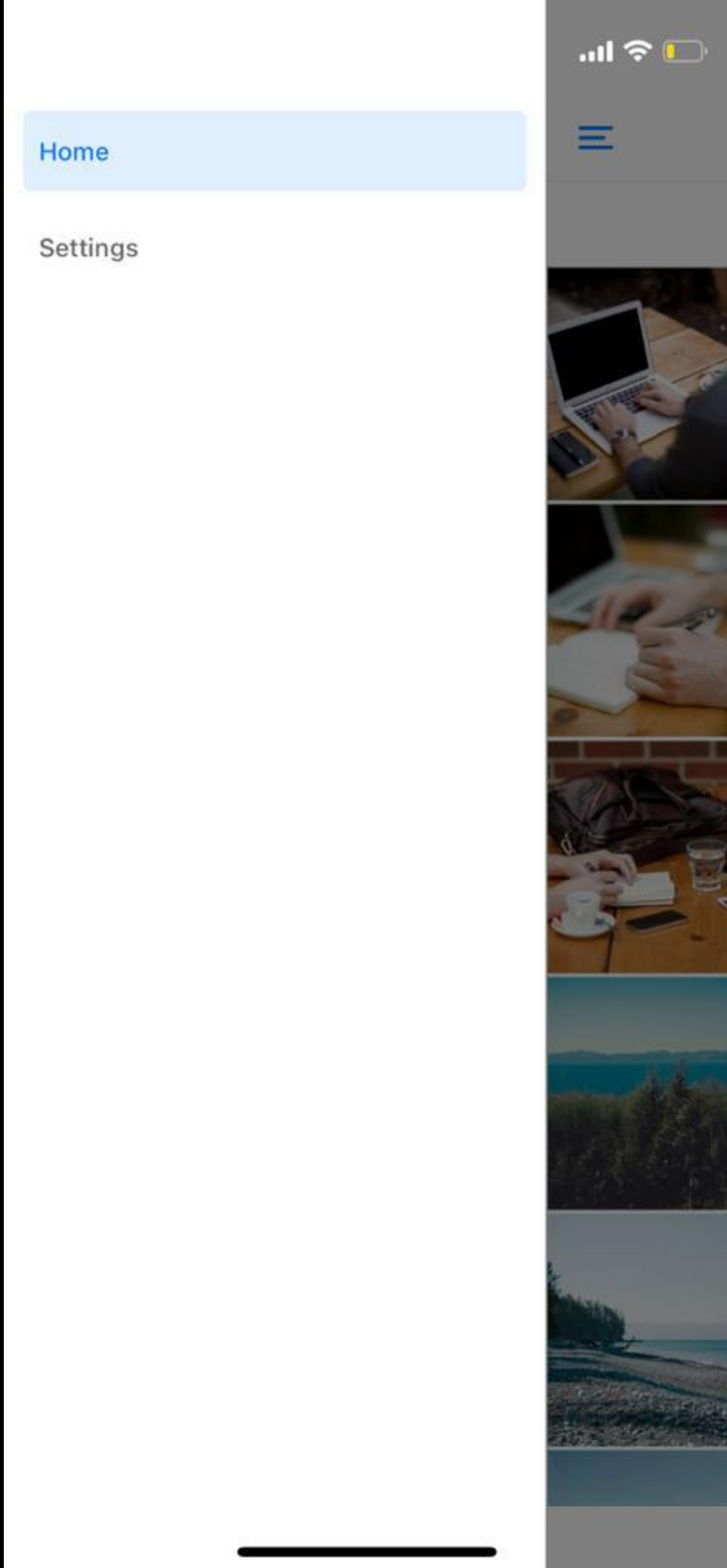
two zebras and a giraffe crossing a road

two zebras and a giraffe are walking down the road

two zebras and a giraffe are walking down a road

Screenshots of the app





Thank You