# Lab 20

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# Objective

# The objective of lab is flutter pagination with REST API

**Student Information**

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| --- | --- |
| **Student Name** |  |
| **Student ID** |  |
| **Date** |  |

**Assessment**

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| **Marks Obtained** |  |
| **Remarks** |  |
| **Signature** |  |

# Objective

# The objective of lab is flutter pagination with REST API

# Instructions

You have to perform the following tasks yourselves. Raise your hand if you face any difficulty in understanding and solving these tasks. **Plagiarism** is an abhorrent practice and you should not engage in it.

# How to Submit?

Submit lab work using Teams.

# Pagination implementation for infinite list

# In real-world Flutter applications, we often load dynamic data from servers or databases instead of using hardcode/dummy data as we often see in online examples.

# For instance, you have an e-commerce app and need to load products from Rest API from the server side. If you only have 10 or 20 products, it will be easy to fetch them all with just one GET request. However, if your platform has thousands of products or even millions of products (e.g. a B2C platform), you have to implement pagination to reduce the burden on the server and reduce latency and improve the app’s performance as well.

# In the beginning, we send a get request and load only a fixed number of results (choose a number that makes sense in your case) and display them in a ListView.

# When the user scrolls to the bottom of the ListView, we send another GET request and fetch another fixed number of results, and so on.

# To know when the user scrolls near the bottom of a ListView, we will create a ScrollController and attach it to the ListView. When ScrollController.position.extendAfter has a value less than a certain level (200 or 300 is good to go), we will call a function that sends a new GET request.

# This app will load some dummy blog posts from a public Pest API endpoint provided by www.jsonplaceholder.typicode.com

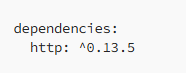
# When the app launches for the first time, we will fetch the first 20 posts. Next, every time we scroll near the bottom of the ListView, a function named \_loadMore will be called and this function will load 20 more posts.

# After all the posts from the API have been loaded, a message will appear letting us know that even if we scroll down, nothing will happen.

# Progress indicators will also appear while we are sending requests to the server.

# Get dependencies

Start by adding the http dependency in your pubspec.yaml. We will need this to make the get call.



# Implementation

# URL: <https://jsonplaceholder.typicode.com/posts>

# 

# 

# Assessments:

# What is pagination in the context of a REST API?

# How do you implement pagination in a Flutter app with a REST API?

# What is the role of query parameters like page and limit in pagination?

# How do you handle pagination data in a REST API response in Flutter?

# How do you display paginated data in a Flutter ListView?