Scenario
A TV broadcaster has decided to roll out 3D TV by geographic area. A software engineering team, developing the online store, is working on the story below.

A “3D add-on” is an enhancement to a customers existing Entertainment Pack. E.g. SPORTS_3D_ADD_ON enhances the SPORTS product.

The broadcaster has partnered with a third party that provides a service that checks the 3D TV availability for a given postcode.

The following files are included in the attached zip
* Basket.java
* ThreeDeeAddOnService.java
* AvailabilityChecker.java
* TechnicalFailureException.java

Instructions
You are required to provide an implementation of the ThreeDeeAddOnService interface, a simple service containing a single method.

Basket and ThreeDeeAddOnService may be changed as you see fit.

The AvailabilityChecker and TechnicalFailureException cannot be modified.

Requirements
The product codes for the entertainment packs are:

SPORTS
KIDS
VARIETY
NEWS
MOVIES_1
MOVIES_2

The product codes for the add-on’s are:
SPORTS_3D_ADD_ON
NEWS_3D_ADD_ON
MOVIES_3D_ADD_ON

The third party service returns the following values:

SERVICE_AVAILABLE 3DTV service is available for the given post code

SERVICE_UNAVAILABLE 3DTV service is unavailable for the given post code
SERVICE_PLANNED 3DTV service is not available right now, but it should be available within the next 3 months
POSTCODE_INVALID The supplied postcode is invalid

If the service is unavailable then a TechnicalFailureException is thrown.

Acceptance Criteria

Postcode	Basket	Expected Output
Currently in a 3D area	3D compatible products in the basket	Return relevant 3D add-ons
N/A	No products with 3D add-ons	Return no 3D add-ons
Currently, not in a 3D area, or technical failure occurs	3D compatible products in the basket	Return no 3D add-ons
Invalid postcode	3D compatible products in the basket	Return no 3D add-ons and notify the client that the postcode was invalid

You may choose any means of accepting input and producing output, including the use of a test harness.

Try and spend no more than two hours on this problem.