



Ports and Adapters

```
user.php — parts_and_adapters
user.php x

1  <?php
2      import_request_variables("pg", "form_");
3      $db = mysql_connect("localhost:/export/mysql/mysql.sock");
4      mysql_select_db("app", $db);
5      $rows = mysql_query("select name, email from users where userid = '$form_userid'",
6      if(mysql_num_rows($rows) == 0) {
7          $error = "No such user name found";
8      } else {
9          $user_name = mysql_result($rows, 0, 0);
10         $user_email = mysql_result($rows, 0, 1);
11     }
12  ?>
13  <html>
14      <head>
15          <title>User information</title>
16      </head>
17      <body>
18          <?php
19              if($error) {
20                  echo "<h1>Error accessing user information</h1>\n";
21                  echo "<p>$error</p>\n";
```

user.php ×

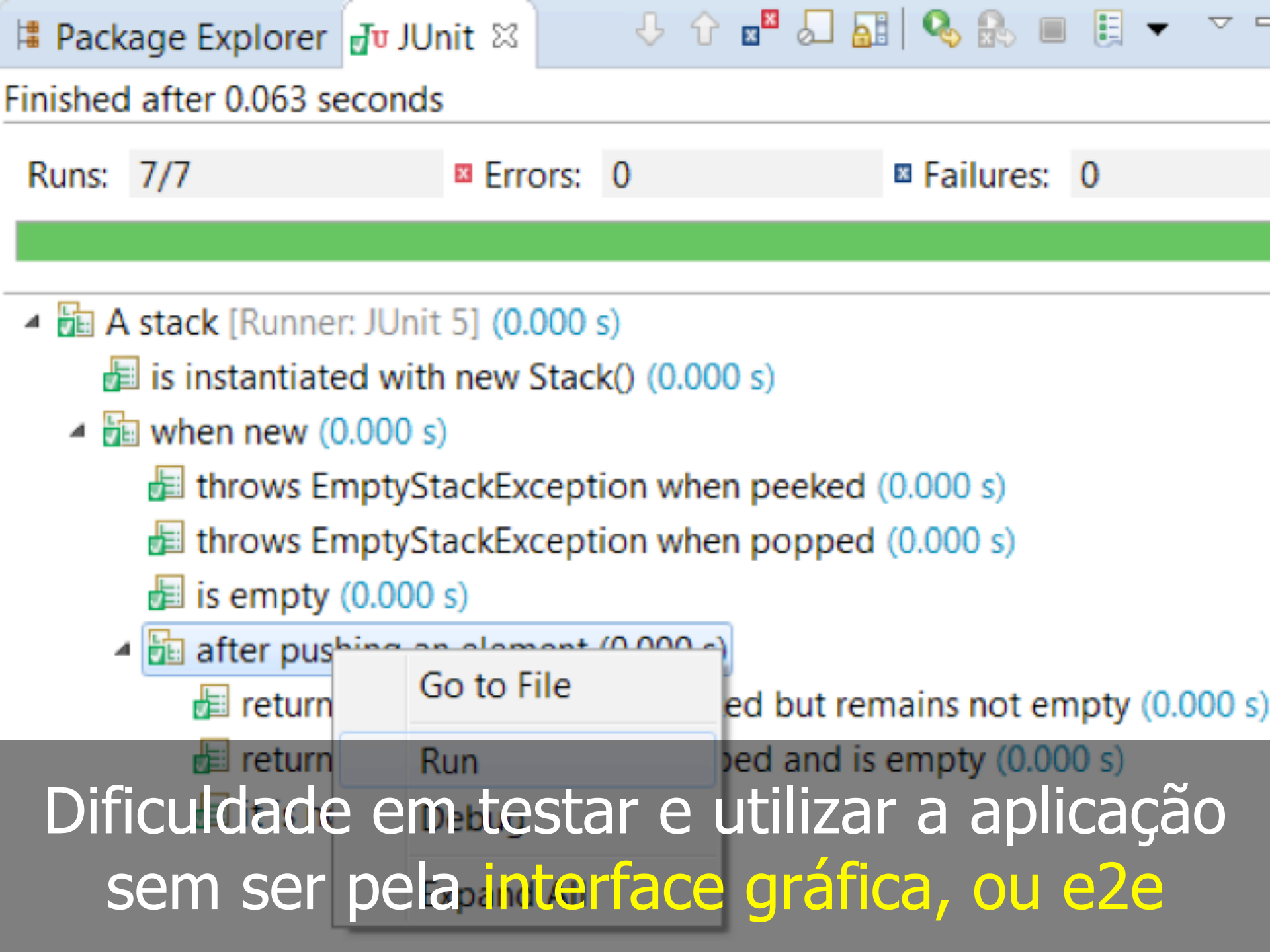
□ ...

```
14 </head>
15 <title>User information</title>
16 </head>
17 <body>
18 <?php
19     if($error) {
20         echo "<h1>Error accessing user information</h1>\n";
21         echo "<p>$error</p>\n";
22     } else {
23         echo "<h1>Information about $form_userid</h1>\n";
24         echo "<p>User ID: <tt>$form_userid</tt></p>\n";
25         echo "<p>Real name: $user_name</p>\n";
26         echo "<p>E-mail address: <tt>$user_email</tt></p>\n";
27     }
28     ?>
29 </body>
30 </html>
31
```



Qual é o **problema**?

Um dos grandes problemas nas aplicações na década passada foi a **implementação de regras de negócio e a interação com o banco de dados na interface gráfica**



Finished after 0.063 seconds

Runs: 7/7 Errors: 0 Failures: 0

- ▲ A stack [Runner: JUnit 5] (0.000 s)
 - is instantiated with new Stack() (0.000 s)
 - ▲ when new (0.000 s)
 - throws EmptyStackException when peeked (0.000 s)
 - throws EmptyStackException when popped (0.000 s)
 - is empty (0.000 s)
 - ▲ after pushing an element (0.000 s)
 - return ... ed but remains not empty (0.000 s)
 - return ... ed and is empty (0.000 s)

Go to File

Run

Debug

Expand All

Dificuldade em testar e utilizar a aplicação sem ser pela interface gráfica, ou e2e

"Allow an application to equally be driven by users, programs, automated test or batch scripts, and to be developed and tested in isolation from its eventual run-time devices and databases"

Alistair Cockburn

**DRIVERS
(Primary Actors)**



Interaction



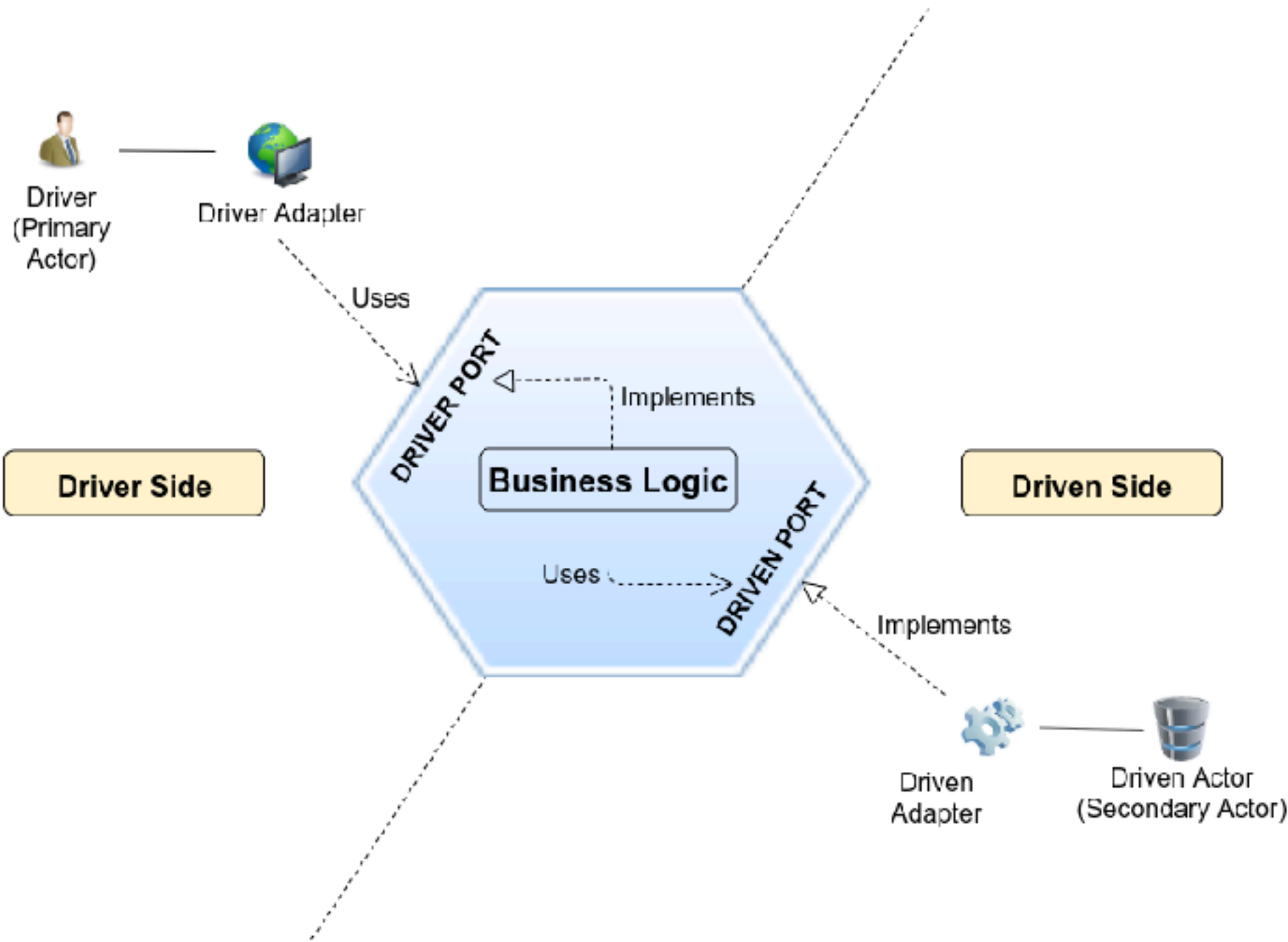
Driver Side

Driven Side

**DRIVEN ACTORS
(Secondary Actors)**



Interaction





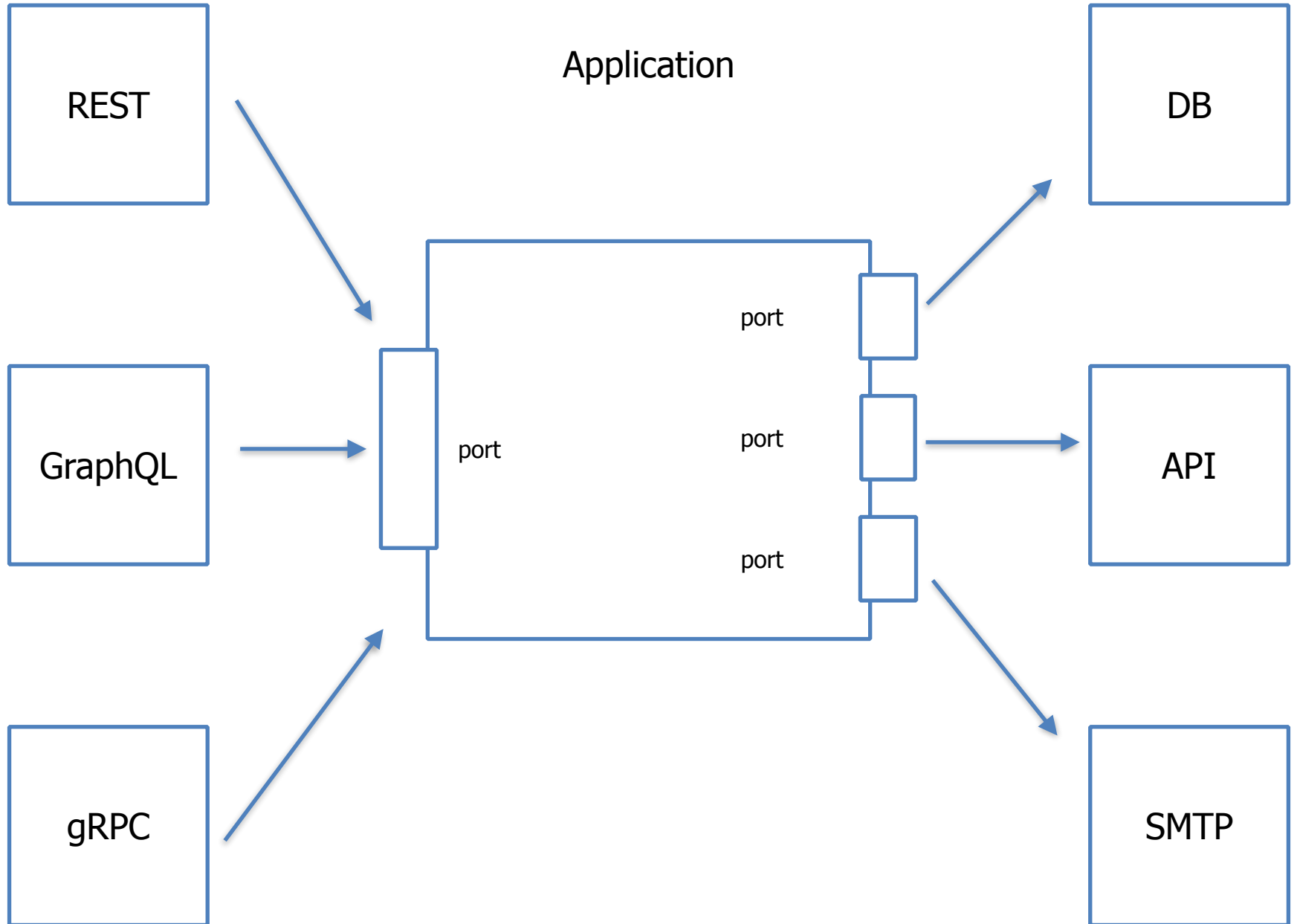
Porque um **hexagono**?

"The hexagon is not a hexagon because the number six is important, but rather to allow the people doing the drawing to have room to insert ports and adapters as they need, not being constrained by a one-dimensional layered drawing. The term hexagonal architecture comes from this visual effect"

Alistair Cockburn

A analogia com uma **porta** é exatamente a mesma que temos quando pensamos em conectar qualquer tipo de dispositivo em um computador, existe um contrato com um protocolo definido onde qualquer fornecedor pode adaptar sua tecnologia para interagir com a porta

Application





Faz sentido **aplicar** em qual tipo e tamanho de projeto?