

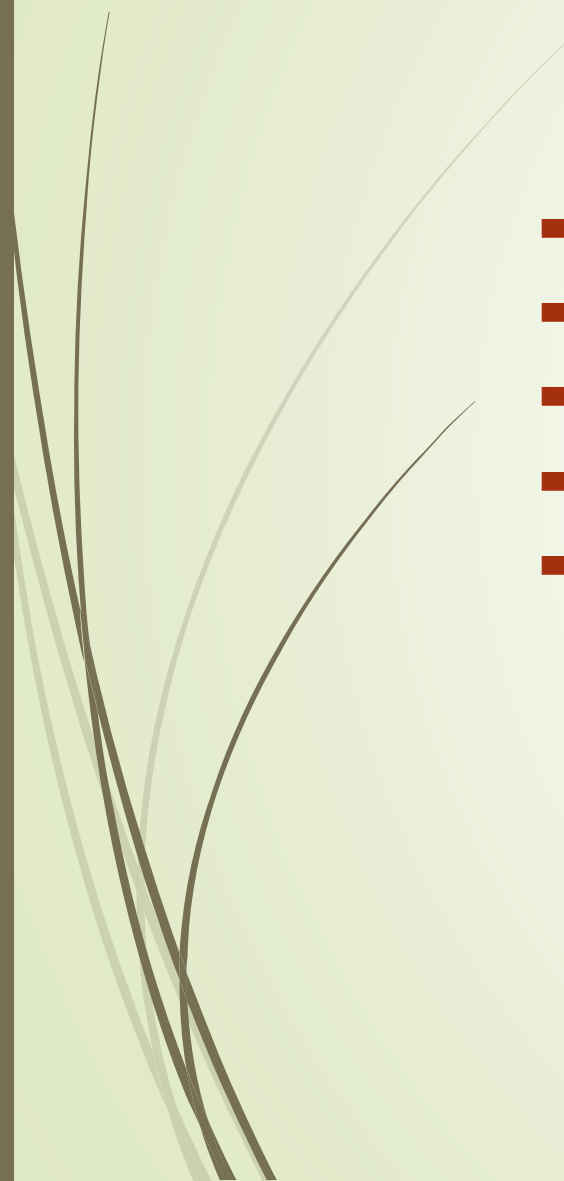


# Trabalho sobre a Linguagem Shell Script

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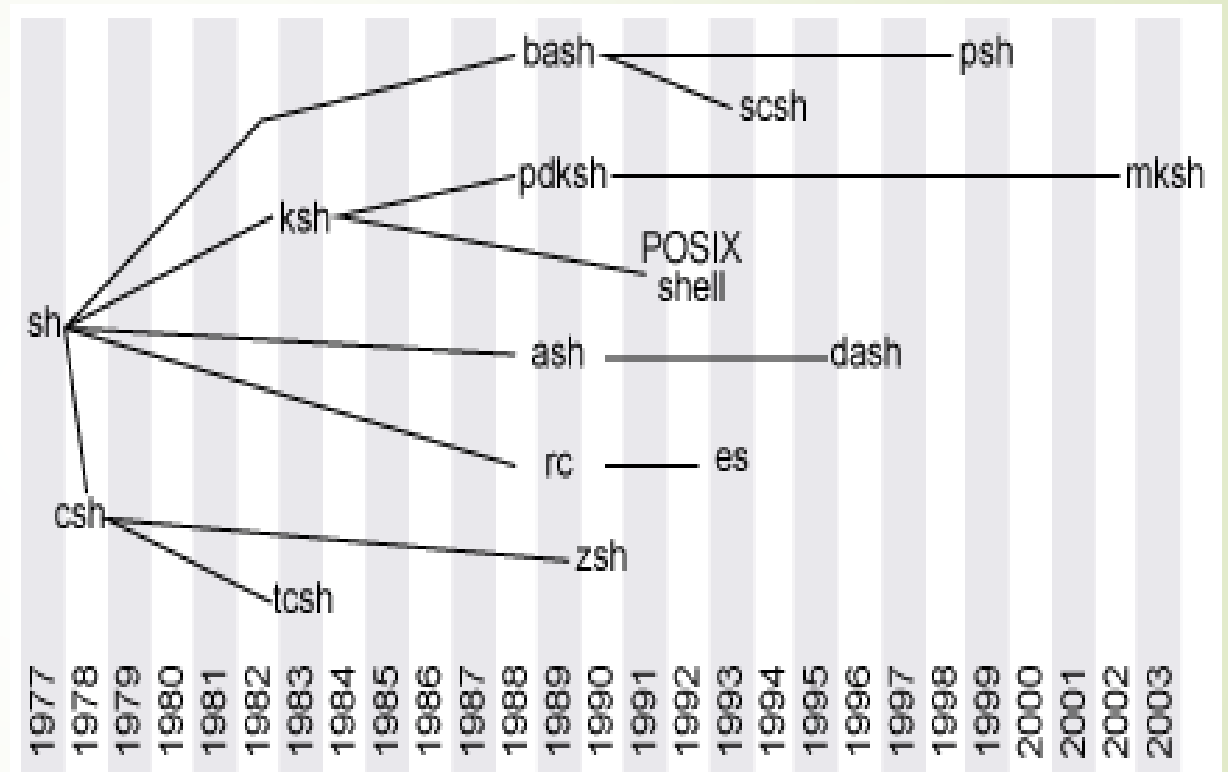


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- Origens e Influências
  - Classificação da Linguagem
  - Estruturas (Variáveis, Controles de Fluxo e Repetição)
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- 

# Origens e Influências

- Linguagem Shell Script.
- Sistemas Operativos baseados em GNU/Unix.
- Ken Thompson, 1971.
- Shell Bourne, 1977.



# Classificação da Linguagem

- Imperativo: Estrutura de repetição, estruturas de decisão, mudança de comportamento de variáveis,
- Procedural: Pode-se criar e reutilizar sub-rotinas a qualquer momento.

**1**

```
smsf@martins:~$ a=1
smsf@martins:~$ echo $a
1
smsf@martins:~$ a="teste"
smsf@martins:~$ echo $a
teste
smsf@martins:~$ a=1.89
smsf@martins:~$ echo $a
1.89
```

**2**

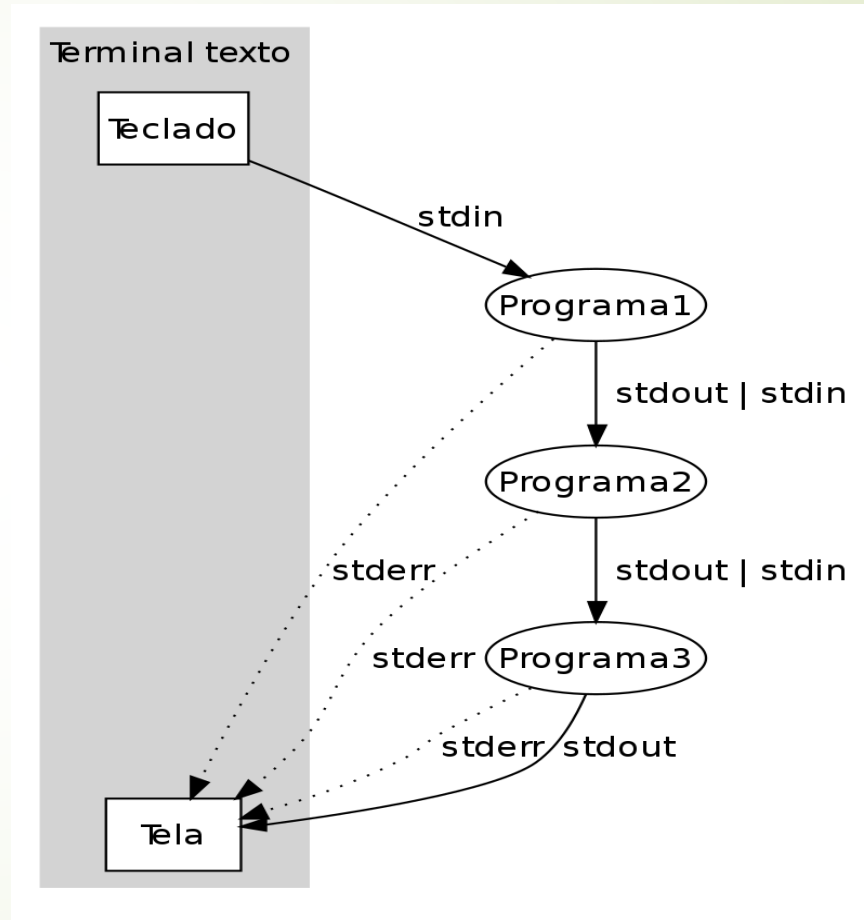
```
1 #!/usr/bin/env bash
2
3 # Extraindo dados
4 python t_realiza_2015.py
5
6 # Caminho
7 path=$(pwd)
8
9 # Fazendo split do arquivo
10 pasta="t_realiza_2015"
11 arquivo_original="t_realiza_1.csv"
12 arq_final="t_realiza_2015_"
13 source /home/martins/Documentos/bd_enem_dados_2015/t_funcoes_shell/t_func_split.sh
14 split_arquivo $path1 $pasta $arquivo_original $arq_final
15
```

**3**

```
1 #!/usr/bin/env bash
2
3 function split_arquivo() {
4
5     # Contando quantas linhas tem no arquivo
6     count=$(wc -l $arquivo_original | awk '{print $1}')
7
8     # Regra para fazer o split do arquivo
9     if [ "$count" -lt 1000000 ]; then
10         split -d -a6 -l 1000000 --additional-suffix=.csv $arquivo_original $path1/$pasta/$arq_final
11     elif [ "$count" -ge 10000001 ] && [ "$count" -lt 80000000 ]; then
12         split -d -a6 -l 3000000 --additional-suffix=.csv $arquivo_original $path1/$pasta/$arq_final
13     elif [ "$count" -ge 80000001 ]; then
14         split -d -a6 -l 5000000 --additional-suffix=.csv $arquivo_original $path1/$pasta/$arq_final
15     fi
16 }
```

# Funcionalidade: Pipe

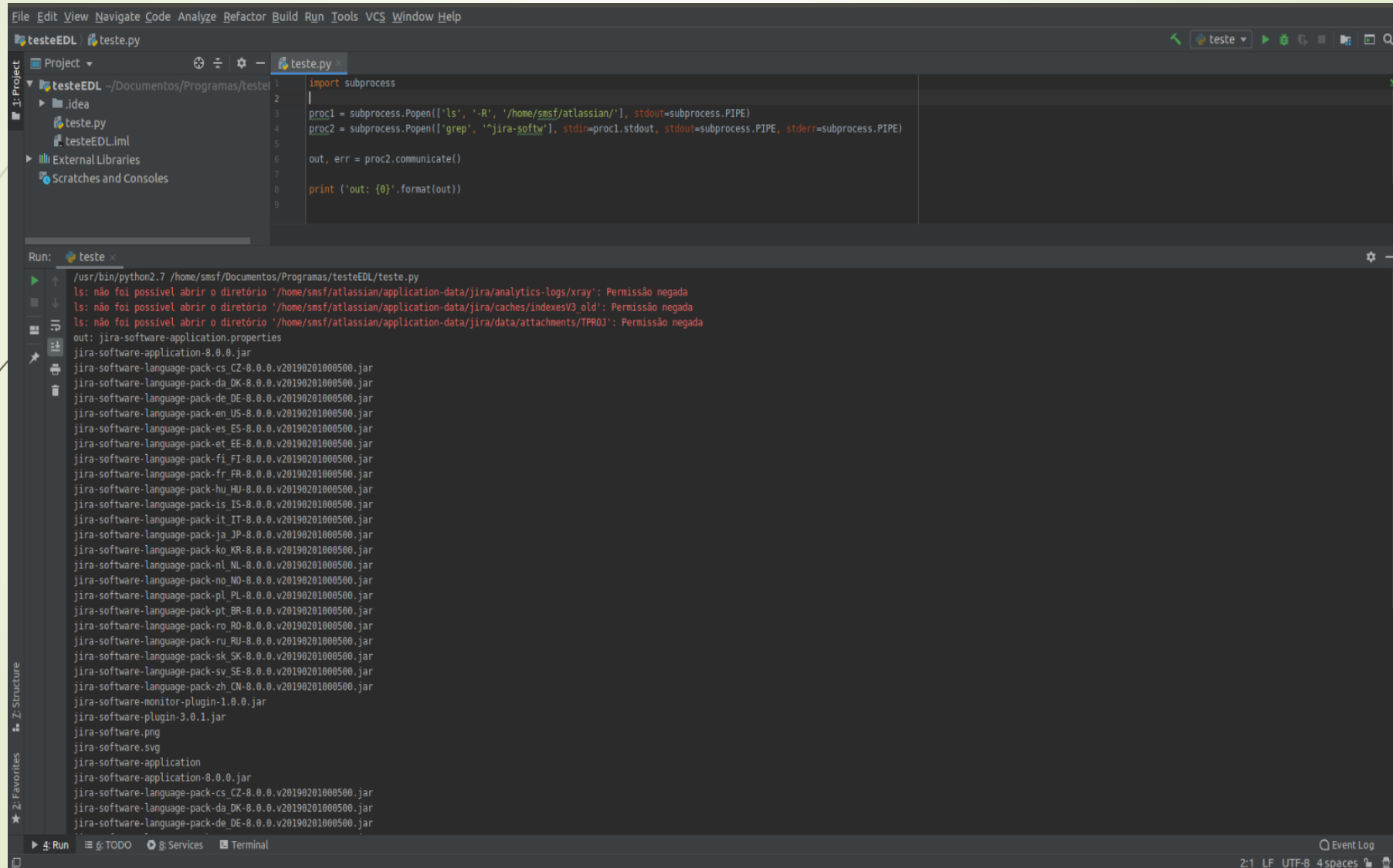
- Encadeamento de comandos.
- Stdout torna-se Stdin de outro programa.
- Stderr: recebe um erro do encadeamento.



# Funcionalidade: Pipe - Shell Script

```
Atividades X-terminal-emulator dom, 1 de set, 16:24
smsf@martins: ~
smsf@martins: ~ 211x55
smsf@martins:~$ ls -R | grep ^jira-softw
ls: nao foi possivel abrir o diretorio './atlassian/application-data/jira/analytics-logs/xray': Permissao negada
ls: nao foi possivel abrir o diretorio './atlassian/application-data/jira/caches/indexesV3_old': Permissao negada
ls: nao foi possivel abrir o diretorio './atlassian/application-data/jira/data/attachments/TPROJ': Permissao negada
jira-software-application.properties
jira-software-application-8.0.0.jar
jira-software-language-pack-cs_CZ-8.0.0.v20190201000500.jar
jira-software-language-pack-da_DK-8.0.0.v20190201000500.jar
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jira-software-language-pack-sv_SE-8.0.0.v20190201000500.jar
jira-software-language-pack-zh_CN-8.0.0.v20190201000500.jar
jira-software-monitor-plugin-1.0.0.jar
jira-software-plugin-3.0.1.jar
jira-software.png
jira-software.svg
jira-software-application
jira-software-application-8.0.0.jar
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jira-software-language-pack-sv_SE-8.0.0.v20190201000500.jar
```

# Funcionalidade: Pipe em Python



```
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
testeEDL / teste.py
Project
  testeEDL ~/Documentos/Programas/testeEDL
    .idea
    teste.py
    testeEDL.iml
  External Libraries
  Scratches and Consoles
Run: teste
  /usr/bin/python2.7 /home/smsf/Documentos/Programas/testeEDL/teste.py
  ls: não foi possível abrir o diretório '/home/smsf/atlassian/application-data/jira/analytics-logs/xray': Permissão negada
  ls: não foi possível abrir o diretório '/home/smsf/atlassian/application-data/jira/caches/indexesV3_old': Permissão negada
  ls: não foi possível abrir o diretório '/home/smsf/atlassian/application-data/jira/data/attachments/TPROJ': Permissão negada
  out: jira-software-application.properties
  jira-software-application-8.0.0.jar
  jira-software-language-pack-cs_CZ-8.0.0.v20190201000500.jar
  jira-software-language-pack-da_DK-8.0.0.v20190201000500.jar
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  jira-software-language-pack-da_DK-8.0.0.v20190201000500.jar
  jira-software-language-pack-de_DE-8.0.0.v20190201000500.jar
  Event Log
  2:1 LF UTF-8 4 spaces
```



# Funcionalidade: Pipe em Java

The screenshot displays an IDE interface with a Java file named `Principal.java` open. The code implements a `main` method that runs a shell command using `ProcessBuilder` and `BufferedReader` to read the output line by line. The command being executed is `ls -R /home/smf/atlassian/ | grep ^jira-softw`, which uses a pipe to filter the output of the `ls` command. The IDE's Maven sidebar on the right shows the project structure, and the bottom status bar indicates a successful build.

```
1 import java.io.BufferedReader;
2 import java.io.IOException;
3 import java.io.InputStreamReader;
4 import java.util.ArrayList;
5 import java.util.List;
6
7 public class Principal {
8
9     public static void main(String[] args) throws IOException {
10
11         Process p;
12         try {
13             List<String> cmdList = new ArrayList<String>();
14             cmdList.add("/bin/sh");
15             cmdList.add("-c");
16             cmdList.add("ls -R /home/smf/atlassian/ | grep ^jira-softw");
17
18             ProcessBuilder processBuilder = new ProcessBuilder(cmdList);
19             p = processBuilder.start();
20             p.waitFor();
21             BufferedReader reader = new BufferedReader(new InputStreamReader(p.getInputStream()));
22
23             String line;
24             while ((line = reader.readLine()) != null) {
25                 System.out.println(line);
26             }
27
28             } catch (InterruptedException e) {
29                 e.printStackTrace();
30             }
31         }
32     }
```

Run: Principal x

/usr/lib/jvm/java-8-oracle/bin/java ...  
jira-software-application.properties  
jira-software-application-8.0.0.jar  
jira-software-language-pack-cs\_CZ-8.0.0.v20190201000500.jar  
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jira-software-language-pack-ko\_KR-8.0.0.v20190201000500.jar  
jira-software-language-pack-lt\_LT-8.0.0.v20190201000500.jar  
jira-software-language-pack-lv\_LV-8.0.0.v20190201000500.jar  
jira-software-language-pack-nb\_NO-8.0.0.v20190201000500.jar  
jira-software-language-pack-nl\_NL-8.0.0.v20190201000500.jar  
jira-software-language-pack-pl\_PL-8.0.0.v20190201000500.jar  
jira-software-language-pack-pt\_PT-8.0.0.v20190201000500.jar  
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jira-software-language-pack-ru\_RU-8.0.0.v20190201000500.jar  
jira-software-language-pack-sk\_SK-8.0.0.v20190201000500.jar  
jira-software-language-pack-sl\_SL-8.0.0.v20190201000500.jar  
jira-software-language-pack-sr\_RS-8.0.0.v20190201000500.jar  
jira-software-language-pack-sv\_SE-8.0.0.v20190201000500.jar  
jira-software-language-pack-th\_TH-8.0.0.v20190201000500.jar  
jira-software-language-pack-tr\_TR-8.0.0.v20190201000500.jar  
jira-software-language-pack-uk\_UK-8.0.0.v20190201000500.jar  
jira-software-language-pack-zh\_CN-8.0.0.v20190201000500.jar  
jira-software-language-pack-zh\_TW-8.0.0.v20190201000500.jar

Build completed successfully with 3 warnings in ... (12 minutes ago)



# Referências

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- What is subprocess in Python?. Disponível em: <https://www.quora.com/What-is-subprocess-in-Python>. Acesso em: 30 ago. 2019.
- Understanding Java Process and Java ProcessBuilder em: <https://www.developer.com/java/data/understanding-java-process-and-java-processbuilder.html>. Acesso: 30 ago. 2019.