puzzlev4

May 19, 2023

```python
[ ]: from google.colab import drive
     drive.mount('/content/drive')
```

```python
[2]: class Node:
         # construtor
         def __init__(self, state, cost, action=None, father=None):
             self.state = state
             self.cost = cost
             self.father = father
             self.action = action
             if father is None:
                 self.caminho = []
                 # print('nó inicial')
             else:
                 self.caminho = []
                 # print('caminho sendo adicionado')
                 self.caminho.append(self.action)
                 self.caminho.extend(self.father.caminho)
                 # print(self.caminho)
```

```python
[3]: import copy
     import time
     import psutil
     import queue
     from collections import deque
     from typing import Deque, Any

     matrizOriginal = [[0, 8, 7], [6, 5, 4], [3, 2, 1]]
     matrizFinal = [[0, 1, 2], [3, 4, 5], [6, 7, 8]]
```

```python
[4]: # Procurando o Zero
     def searchZero(matrizOriginal):
         for i in range(len(matrizOriginal)):
             for j in range(len(matrizOriginal[0])):
                 if matrizOriginal[i][j] == 0:
                     return i, j
```

```python
def comparar_matrizes(currentMatriz, finalMatriz):
    if len(currentMatriz) != len(finalMatriz) or len(currentMatriz[0]) != len(
        finalMatriz[0]
    ):
        return False  # se as matrizes tiverem tamanhos diferentes, elas não
    são iguais

    for i in range(len(currentMatriz)):
        for j in range(len(currentMatriz[0])):
            if currentMatriz[i][j] != finalMatriz[i][j]:
                return False  # se um elemento for diferente, as matrizes não
    são iguais

    return True  # se todas as comparações forem iguais, as matrizes são iguais


# transforma um tupla


def turnInTuple(matriz):
    matrizTuple = tuple(tuple(linha) for linha in matriz)
    return matrizTuple


def turnInString(matriz):
    matrizStr = "".join(str(i) for j in matriz for i in j)
    return matrizStr
```

```python
[5]: def geraEstados(matrizOriginal):
    posicoesPossiveis = {
        (0, 0): ["Right", "Down"],
        (0, 1): ["Right", "Down", "Left"],
        (0, 2): ["Left", "Down"],
        (1, 0): ["Up", "Righ", "Down"],
        (1, 1): ["Left", "Up", "Right", "Down"],
        (1, 2): ["Up", "Left", "Down"],
        (2, 0): ["Up", "Right"],
        (2, 1): ["Left", "Up", "Right"],
        (2, 2): ["Left", "Up"],
    }

    # Achando qual as posiçoes possiveis para um posicionamento especifico
    # index do zero
    index = searchZero(matrizOriginal)
    # Vetor com as posições possiveis (Right...Down)
    chavePosicional = posicoesPossiveis[searchZero(matrizOriginal)]
```

```python
    # vetor com os estados de cada nó
    nodeStates = []

    # For das possibilidades de estados
    for movimento in chavePosicional:
        # COPIA MATRIZ
        matrizCopia = copy.deepcopy(matrizOriginal)

        if movimento == "Right":
            currentState = trocaDireita(matrizCopia, index)

        if movimento == "Left":
            currentState = trocaEsquerda(matrizCopia, index)

        if movimento == "Up":
            currentState = trocaCima(matrizCopia, index)

        if movimento == "Down":
            currentState = trocaBaixo(matrizCopia, index)

        # Salva estado e movimento
        nodeStates.append((currentState, movimento))

    return nodeStates
```

```python
[6]: def trocaDireita(matrizCopia, index):
    # trocando as posicoes
    # matrizCopia [ index[0] ] [ index[1] ], matrizCopia[ index[0] ] [ index[1]␣
 ↪+ 1] = matrizCopia[index[0]][index[1] + 1], matrizCopia[index[0]][index[1]]

    matrizCopia[index[0]][index[1]], matrizCopia[index[0]][index[1] + 1] = (
        matrizCopia[index[0]][index[1] + 1],
        matrizCopia[index[0]][index[1]],
    )

    return matrizCopia


def trocaEsquerda(matrizCopia, index):
    # trocando as posicoes
    matrizCopia[index[0]][index[1]], matrizCopia[index[0]][index[1] - 1] = (
        matrizCopia[index[0]][index[1] - 1],
        matrizCopia[index[0]][index[1]],
    )
    return matrizCopia
```

```python
def trocaCima(matrizCopia, index):
    # trocando as posicoes
    matrizCopia[index[0]][index[1]], matrizCopia[index[0] - 1][index[1]] = (
        matrizCopia[index[0] - 1][index[1]],
        matrizCopia[index[0]][index[1]],
    )

    return matrizCopia


def trocaBaixo(matrizCopia, index):
    # trocando as posicoes
    matrizCopia[index[0]][index[1]], matrizCopia[index[0] + 1][index[1]] = (
        matrizCopia[index[0] + 1][index[1]],
        matrizCopia[index[0]][index[1]],
    )
    return matrizCopia
```

```python
# BFS
def BFS(matrizOriginal):
    startTime = time.time()
    startMemory = psutil.Process().memory_info().rss

    initialNode = Node(matrizOriginal, 0)

    if comparar_matrizes(initialNode.state, matrizFinal):
        print("achei solução")
        return initialNode
    # fim if

    caminho = []

    # Criando a fila
    borda = queue.Queue()
    borda.put(initialNode)

    # conjuntando de nós explorados
    explorado = set()
    # transformando a matriz em string
    matrizStr = turnInString(initialNode.state)
    # adicionando elemento ao conjunto dos explorados
    explorado.add(matrizStr)

    # Contador para os nós expandidos
    noExpandido = 0
    # Fringe Size
    fringeNode = 0
```

```python
    # Max Fringe Size
max_search_depth = 0

while not borda.empty():
    # Fringe Size contador
    fringeNode = fringeNode + 1
    noDesenfilado = borda.get()
    # max_search_depth = max(max_search_depth, noDesenfilado.cost)

    # Transformando o no desenfilado em string
    noDesenfiladoStr = turnInString(noDesenfilado.state)
    if noDesenfiladoStr not in explorado:
        noExpandido = noExpandido + 1
    # fim if

    # print(type(noDesenfilado.state))
    # Adicionando aos elementos explorados
    explorado.add(noDesenfiladoStr)

    # vetor de estados de cada nó + movimentação
    vetorEstados = geraEstados(noDesenfilado.state)
    # print(vetorEstados)

    # value --> valor na posicao atual
    #      0          1      2
    # (estado,movimento)
    #  value[0], value[1]
    for value in vetorEstados:
        # print(value)
        currentNode = Node(
            value[0], noDesenfilado.cost + 1, value[1], noDesenfilado
        )

        # guardando os movimentos
        caminho.append(currentNode.action)

        # print('NÓ ATUAL')
        # print(currentNode.state)

        # Transformando o no atual em string
        currentNodeStr = turnInString(currentNode.state)

        if currentNodeStr not in explorado:
            # Compare se o estado atual do current node é igual a solução
            if comparar_matrizes(currentNode.state, matrizFinal):
                endTime = time.time()
                duration = endTime - startTime
```

```python
                    endMemory = psutil.Process().memory_info().rss
                    maxRamUsage = endMemory - startMemory
                    max_search_depth = max(max_search_depth, currentNode.cost)
                    return (
                        currentNode,
                        noExpandido,
                        fringeNode,
                        max_search_depth,
                        duration,
                        maxRamUsage,
                    )
                # Adicionando um novo filho na fila
                borda.put(currentNode)


        # fim for
    # fim while
    return None


answer = BFS(matrizOriginal)
print("O estado do no final eh: ", answer[0].state)
print("O caminho eh: ", answer[0].caminho)
print("O custo eh: ", answer[0].cost)
print("Os nos expandidos sao: ", answer[1])
print("O fringe size eh: ", answer[2])
print("O search depth eh: ", answer[0].cost)
print("O search depth maximo eh: ", answer[3])
print("O tempo de execucao foi de: ", answer[4])
print("A memoria ram utilizada foi: ", answer[5])
```

```
O estado do no final eh:  [[0, 1, 2], [3, 4, 5], [6, 7, 8]]
O caminho eh:  ['Left', 'Up', 'Up', 'Left', 'Down', 'Down', 'Right', 'Up', 'Up',
'Right', 'Down', 'Left', 'Up', 'Left', 'Down', 'Down', 'Right', 'Right', 'Up',
'Left', 'Down', 'Left', 'Up', 'Right', 'Up', 'Left', 'Down', 'Down', 'Right',
'Right']
O custo eh:  30
Os nos expandidos sao:  175149
O fringe size eh:  1205376
O search depth eh:  30
O search depth maximo eh:  30
O tempo de execucao foi de:  88.75117874145508
A memoria ram utilizada foi:  732073984
```

```
[1]: !jupyter nbconvert --to pdf /content/drive/MyDrive/IA/puzzlev4.ipynb
```

```
Reading package lists… Done
Building dependency tree
Reading state information… Done
```

The following additional packages will be installed:
  dvisvgm fonts-droid-fallback fonts-lato fonts-lmodern fonts-noto-mono
  fonts-texgyre fonts-urw-base35 javascript-common libapache-pom-java
  libcommons-logging-java libcommons-parent-java libfontbox-java libfontenc1
  libgs9 libgs9-common libharfbuzz-icu0 libidn11 libijs-0.35 libjbig2dec0
  libjs-jquery libkpathsea6 libpdfbox-java libptexenc1 libruby2.7 libsynctex2
  libteckit0 libtexlua53 libtexluajit2 libwoff1 libzzip-0-13 lmodern
  poppler-data preview-latex-style rake ruby ruby-minitest ruby-net-telnet
  ruby-power-assert ruby-test-unit ruby-xmlrpc ruby2.7 rubygems-integration
  t1utils teckit tex-common tex-gyre texlive-base texlive-binaries
  texlive-latex-base texlive-latex-extra texlive-latex-recommended
  texlive-pictures tipa xfonts-encodings xfonts-utils
Suggested packages:
  fonts-noto fonts-freefont-otf | fonts-freefont-ttf apache2 | lighttpd
  | httpd libavalon-framework-java libcommons-logging-java-doc
  libexcalibur-logkit-java liblog4j1.2-java poppler-utils ghostscript
  fonts-japanese-mincho | fonts-ipafont-mincho fonts-japanese-gothic
  | fonts-ipafont-gothic fonts-arphic-ukai fonts-arphic-uming fonts-nanum ri
  ruby-dev bundler debhelper gv | postscript-viewer perl-tk xpdf | pdf-viewer
  xzdec texlive-fonts-recommended-doc texlive-latex-base-doc python3-pygments
  icc-profiles libfile-which-perl libspreadsheet-parseexcel-perl
  texlive-latex-extra-doc texlive-latex-recommended-doc texlive-luatex
  texlive-pstricks dot2tex prerex ruby-tcltk | libtcltk-ruby
  texlive-pictures-doc vprerex default-jre-headless
The following NEW packages will be installed:
  dvisvgm fonts-droid-fallback fonts-lato fonts-lmodern fonts-noto-mono
  fonts-texgyre fonts-urw-base35 javascript-common libapache-pom-java
  libcommons-logging-java libcommons-parent-java libfontbox-java libfontenc1
  libgs9 libgs9-common libharfbuzz-icu0 libidn11 libijs-0.35 libjbig2dec0
  libjs-jquery libkpathsea6 libpdfbox-java libptexenc1 libruby2.7 libsynctex2
  libteckit0 libtexlua53 libtexluajit2 libwoff1 libzzip-0-13 lmodern
  poppler-data preview-latex-style rake ruby ruby-minitest ruby-net-telnet
  ruby-power-assert ruby-test-unit ruby-xmlrpc ruby2.7 rubygems-integration
  t1utils teckit tex-common tex-gyre texlive-base texlive-binaries
  texlive-fonts-recommended texlive-latex-base texlive-latex-extra
  texlive-latex-recommended texlive-pictures texlive-plain-generic
  texlive-xetex tipa xfonts-encodings xfonts-utils
0 upgraded, 58 newly installed, 0 to remove and 24 not upgraded.
Need to get 169 MB of archives.
After this operation, 537 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 fonts-droid-fallback all
1:6.0.1r16-1.1 [1,805 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal/main amd64 fonts-lato all 2.0-2
[2,698 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal/main amd64 poppler-data all 0.4.9-2
[1,475 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal/universe amd64 tex-common all 6.13
[32.7 kB]

```
Get:5 http://archive.ubuntu.com/ubuntu focal/main amd64 fonts-urw-base35 all
20170801.1-3 [6,333 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libgs9-common
all 9.50~dfsg-5ubuntu4.7 [681 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/main amd64 libidn11 amd64
1.33-2.2ubuntu2 [46.2 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal/main amd64 libijs-0.35 amd64
0.35-15 [15.7 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal/main amd64 libjbig2dec0 amd64
0.18-1ubuntu1 [60.0 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libgs9 amd64
9.50~dfsg-5ubuntu4.7 [2,173 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/main amd64 libkpathsea6 amd64
2019.20190605.51237-3build2 [57.0 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/main amd64 libwoff1 amd64
1.0.2-1build2 [42.0 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal/universe amd64 dvisvgm amd64
2.8.1-1build1 [1,048 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal/universe amd64 fonts-lmodern all
2.004.5-6 [4,532 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 fonts-noto-mono
all 20200323-1build1~ubuntu20.04.1 [80.6 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal/universe amd64 fonts-texgyre all
20180621-3 [10.2 MB]
Get:17 http://archive.ubuntu.com/ubuntu focal/main amd64 javascript-common all
11 [6,066 B]
Get:18 http://archive.ubuntu.com/ubuntu focal/universe amd64 libapache-pom-java
all 18-1 [4,720 B]
Get:19 http://archive.ubuntu.com/ubuntu focal/universe amd64 libcommons-parent-
java all 43-1 [10.8 kB]
Get:20 http://archive.ubuntu.com/ubuntu focal/universe amd64 libcommons-logging-
java all 1.2-2 [60.3 kB]
Get:21 http://archive.ubuntu.com/ubuntu focal/main amd64 libfontenc1 amd64
1:1.1.4-0ubuntu1 [14.0 kB]
Get:22 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libharfbuzz-
icu0 amd64 2.6.4-1ubuntu4.2 [5,580 B]
Get:23 http://archive.ubuntu.com/ubuntu focal/main amd64 libjs-jquery all
3.3.1~dfsg-3 [329 kB]
Get:24 http://archive.ubuntu.com/ubuntu focal/main amd64 libptexenc1 amd64
2019.20190605.51237-3build2 [35.5 kB]
Get:25 http://archive.ubuntu.com/ubuntu focal/main amd64 rubygems-integration
all 1.16 [5,092 B]
Get:26 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 ruby2.7 amd64
2.7.0-5ubuntu1.10 [95.6 kB]
Get:27 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby amd64 1:2.7+1
[5,412 B]
Get:28 http://archive.ubuntu.com/ubuntu focal/main amd64 rake all 13.0.1-4 [61.6
kB]
```

```
Get:29 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby-minitest all
5.13.0-1 [40.9 kB]
Get:30 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby-net-telnet all
0.1.1-2 [12.6 kB]
Get:31 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby-power-assert all
1.1.7-1 [11.4 kB]
Get:32 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby-test-unit all
3.3.5-1 [73.2 kB]
Get:33 http://archive.ubuntu.com/ubuntu focal/main amd64 ruby-xmlrpc all 0.3.0-2
[23.8 kB]
Get:34 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libruby2.7
amd64 2.7.0-5ubuntu1.10 [3,532 kB]
Get:35 http://archive.ubuntu.com/ubuntu focal/main amd64 libsynctex2 amd64
2019.20190605.51237-3build2 [55.0 kB]
Get:36 http://archive.ubuntu.com/ubuntu focal/universe amd64 libteckit0 amd64
2.5.8+ds2-5ubuntu2 [320 kB]
Get:37 http://archive.ubuntu.com/ubuntu focal/main amd64 libtexlua53 amd64
2019.20190605.51237-3build2 [105 kB]
Get:38 http://archive.ubuntu.com/ubuntu focal/main amd64 libtexluajit2 amd64
2019.20190605.51237-3build2 [235 kB]
Get:39 http://archive.ubuntu.com/ubuntu focal/universe amd64 libzzip-0-13 amd64
0.13.62-3.2ubuntu1 [26.2 kB]
Get:40 http://archive.ubuntu.com/ubuntu focal/main amd64 xfonts-encodings all
1:1.0.5-0ubuntu1 [573 kB]
Get:41 http://archive.ubuntu.com/ubuntu focal/main amd64 xfonts-utils amd64
1:7.7+6 [91.5 kB]
Get:42 http://archive.ubuntu.com/ubuntu focal/universe amd64 lmodern all
2.004.5-6 [9,474 kB]
Get:43 http://archive.ubuntu.com/ubuntu focal/universe amd64 preview-latex-style
all 11.91-2ubuntu2 [184 kB]
Get:44 http://archive.ubuntu.com/ubuntu focal/main amd64 t1utils amd64 1.41-3
[56.1 kB]
Get:45 http://archive.ubuntu.com/ubuntu focal/universe amd64 teckit amd64
2.5.8+ds2-5ubuntu2 [687 kB]
Get:46 http://archive.ubuntu.com/ubuntu focal/universe amd64 tex-gyre all
20180621-3 [6,209 kB]
Get:47 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-binaries
amd64 2019.20190605.51237-3build2 [8,041 kB]
Get:48 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-base all
2019.20200218-1 [20.8 MB]
Get:49 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-fonts-
recommended all 2019.20200218-1 [4,972 kB]
Get:50 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-latex-base
all 2019.20200218-1 [990 kB]
Get:51 http://archive.ubuntu.com/ubuntu focal/universe amd64 libfontbox-java all
1:1.8.16-2 [207 kB]
Get:52 http://archive.ubuntu.com/ubuntu focal/universe amd64 libpdfbox-java all
1:1.8.16-2 [5,199 kB]
```

```
Get:53 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-latex-
recommended all 2019.20200218-1 [15.7 MB]
Get:54 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-pictures
all 2019.20200218-1 [4,492 kB]
Get:55 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-latex-extra
all 2019.202000218-1 [12.5 MB]
Get:56 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-plain-
generic all 2019.202000218-1 [24.6 MB]
Get:57 http://archive.ubuntu.com/ubuntu focal/universe amd64 tipa all 2:1.3-20
[2,978 kB]
Get:58 http://archive.ubuntu.com/ubuntu focal/universe amd64 texlive-xetex all
2019.20200218-1 [14.6 MB]
Fetched 169 MB in 5s (36.4 MB/s)
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 76,
<> line 58.)
debconf: falling back to frontend: Readline
debconf: unable to initialize frontend: Readline
debconf: (This frontend requires a controlling tty.)
debconf: falling back to frontend: Teletype
dpkg-preconfigure: unable to re-open stdin:
Selecting previously unselected package fonts-droid-fallback.
(Reading database … 122531 files and directories currently installed.)
Preparing to unpack …/00-fonts-droid-fallback_1%3a6.0.1r16-1.1_all.deb …
Unpacking fonts-droid-fallback (1:6.0.1r16-1.1) …
Selecting previously unselected package fonts-lato.
Preparing to unpack …/01-fonts-lato_2.0-2_all.deb …
Unpacking fonts-lato (2.0-2) …
Selecting previously unselected package poppler-data.
Preparing to unpack …/02-poppler-data_0.4.9-2_all.deb …
Unpacking poppler-data (0.4.9-2) …
Selecting previously unselected package tex-common.
Preparing to unpack …/03-tex-common_6.13_all.deb …
Unpacking tex-common (6.13) …
Selecting previously unselected package fonts-urw-base35.
Preparing to unpack …/04-fonts-urw-base35_20170801.1-3_all.deb …
Unpacking fonts-urw-base35 (20170801.1-3) …
Selecting previously unselected package libgs9-common.
Preparing to unpack …/05-libgs9-common_9.50~dfsg-5ubuntu4.7_all.deb …
Unpacking libgs9-common (9.50~dfsg-5ubuntu4.7) …
Selecting previously unselected package libidn11:amd64.
Preparing to unpack …/06-libidn11_1.33-2.2ubuntu2_amd64.deb …
Unpacking libidn11:amd64 (1.33-2.2ubuntu2) …
Selecting previously unselected package libijs-0.35:amd64.
Preparing to unpack …/07-libijs-0.35_0.35-15_amd64.deb …
Unpacking libijs-0.35:amd64 (0.35-15) …
Selecting previously unselected package libjbig2dec0:amd64.
```

```
Preparing to unpack …/08-libjbig2dec0_0.18-1ubuntu1_amd64.deb …
Unpacking libjbig2dec0:amd64 (0.18-1ubuntu1) …
Selecting previously unselected package libgs9:amd64.
Preparing to unpack …/09-libgs9_9.50~dfsg-5ubuntu4.7_amd64.deb …
Unpacking libgs9:amd64 (9.50~dfsg-5ubuntu4.7) …
Selecting previously unselected package libkpathsea6:amd64.
Preparing to unpack …/10-libkpathsea6_2019.20190605.51237-3build2_amd64.deb
…
Unpacking libkpathsea6:amd64 (2019.20190605.51237-3build2) …
Selecting previously unselected package libwoff1:amd64.
Preparing to unpack …/11-libwoff1_1.0.2-1build2_amd64.deb …
Unpacking libwoff1:amd64 (1.0.2-1build2) …
Selecting previously unselected package dvisvgm.
Preparing to unpack …/12-dvisvgm_2.8.1-1build1_amd64.deb …
Unpacking dvisvgm (2.8.1-1build1) …
Selecting previously unselected package fonts-lmodern.
Preparing to unpack …/13-fonts-lmodern_2.004.5-6_all.deb …
Unpacking fonts-lmodern (2.004.5-6) …
Selecting previously unselected package fonts-noto-mono.
Preparing to unpack …/14-fonts-noto-
mono_20200323-1build1~ubuntu20.04.1_all.deb …
Unpacking fonts-noto-mono (20200323-1build1~ubuntu20.04.1) …
Selecting previously unselected package fonts-texgyre.
Preparing to unpack …/15-fonts-texgyre_20180621-3_all.deb …
Unpacking fonts-texgyre (20180621-3) …
Selecting previously unselected package javascript-common.
Preparing to unpack …/16-javascript-common_11_all.deb …
Unpacking javascript-common (11) …
Selecting previously unselected package libapache-pom-java.
Preparing to unpack …/17-libapache-pom-java_18-1_all.deb …
Unpacking libapache-pom-java (18-1) …
Selecting previously unselected package libcommons-parent-java.
Preparing to unpack …/18-libcommons-parent-java_43-1_all.deb …
Unpacking libcommons-parent-java (43-1) …
Selecting previously unselected package libcommons-logging-java.
Preparing to unpack …/19-libcommons-logging-java_1.2-2_all.deb …
Unpacking libcommons-logging-java (1.2-2) …
Selecting previously unselected package libfontenc1:amd64.
Preparing to unpack …/20-libfontenc1_1%3a1.1.4-0ubuntu1_amd64.deb …
Unpacking libfontenc1:amd64 (1:1.1.4-0ubuntu1) …
Selecting previously unselected package libharfbuzz-icu0:amd64.
Preparing to unpack …/21-libharfbuzz-icu0_2.6.4-1ubuntu4.2_amd64.deb …
Unpacking libharfbuzz-icu0:amd64 (2.6.4-1ubuntu4.2) …
Selecting previously unselected package libjs-jquery.
Preparing to unpack …/22-libjs-jquery_3.3.1~dfsg-3_all.deb …
Unpacking libjs-jquery (3.3.1~dfsg-3) …
Selecting previously unselected package libptexenc1:amd64.
Preparing to unpack …/23-libptexenc1_2019.20190605.51237-3build2_amd64.deb …
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Unpacking libptexenc1:amd64 (2019.20190605.51237-3build2) …
Selecting previously unselected package rubygems-integration.
Preparing to unpack …/24-rubygems-integration_1.16_all.deb …
Unpacking rubygems-integration (1.16) …
Selecting previously unselected package ruby2.7.
Preparing to unpack …/25-ruby2.7_2.7.0-5ubuntu1.10_amd64.deb …
Unpacking ruby2.7 (2.7.0-5ubuntu1.10) …
Selecting previously unselected package ruby.
Preparing to unpack …/26-ruby_1%3a2.7+1_amd64.deb …
Unpacking ruby (1:2.7+1) …
Selecting previously unselected package rake.
Preparing to unpack …/27-rake_13.0.1-4_all.deb …
Unpacking rake (13.0.1-4) …
Selecting previously unselected package ruby-minitest.
Preparing to unpack …/28-ruby-minitest_5.13.0-1_all.deb …
Unpacking ruby-minitest (5.13.0-1) …
Selecting previously unselected package ruby-net-telnet.
Preparing to unpack …/29-ruby-net-telnet_0.1.1-2_all.deb …
Unpacking ruby-net-telnet (0.1.1-2) …
Selecting previously unselected package ruby-power-assert.
Preparing to unpack …/30-ruby-power-assert_1.1.7-1_all.deb …
Unpacking ruby-power-assert (1.1.7-1) …
Selecting previously unselected package ruby-test-unit.
Preparing to unpack …/31-ruby-test-unit_3.3.5-1_all.deb …
Unpacking ruby-test-unit (3.3.5-1) …
Selecting previously unselected package ruby-xmlrpc.
Preparing to unpack …/32-ruby-xmlrpc_0.3.0-2_all.deb …
Unpacking ruby-xmlrpc (0.3.0-2) …
Selecting previously unselected package libruby2.7:amd64.
Preparing to unpack …/33-libruby2.7_2.7.0-5ubuntu1.10_amd64.deb …
Unpacking libruby2.7:amd64 (2.7.0-5ubuntu1.10) …
Selecting previously unselected package libsynctex2:amd64.
Preparing to unpack …/34-libsynctex2_2019.20190605.51237-3build2_amd64.deb …
Unpacking libsynctex2:amd64 (2019.20190605.51237-3build2) …
Selecting previously unselected package libteckit0:amd64.
Preparing to unpack …/35-libteckit0_2.5.8+ds2-5ubuntu2_amd64.deb …
Unpacking libteckit0:amd64 (2.5.8+ds2-5ubuntu2) …
Selecting previously unselected package libtexlua53:amd64.
Preparing to unpack …/36-libtexlua53_2019.20190605.51237-3build2_amd64.deb …
Unpacking libtexlua53:amd64 (2019.20190605.51237-3build2) …
Selecting previously unselected package libtexluajit2:amd64.
Preparing to unpack …/37-libtexluajit2_2019.20190605.51237-3build2_amd64.deb
…
Unpacking libtexluajit2:amd64 (2019.20190605.51237-3build2) …
Selecting previously unselected package libzzip-0-13:amd64.
Preparing to unpack …/38-libzzip-0-13_0.13.62-3.2ubuntu1_amd64.deb …
Unpacking libzzip-0-13:amd64 (0.13.62-3.2ubuntu1) …
Selecting previously unselected package xfonts-encodings.
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Preparing to unpack …/39-xfonts-encodings_1%3a1.0.5-0ubuntu1_all.deb …
Unpacking xfonts-encodings (1:1.0.5-0ubuntu1) …
Selecting previously unselected package xfonts-utils.
Preparing to unpack …/40-xfonts-utils_1%3a7.7+6_amd64.deb …
Unpacking xfonts-utils (1:7.7+6) …
Selecting previously unselected package lmodern.
Preparing to unpack …/41-lmodern_2.004.5-6_all.deb …
Unpacking lmodern (2.004.5-6) …
Selecting previously unselected package preview-latex-style.
Preparing to unpack …/42-preview-latex-style_11.91-2ubuntu2_all.deb …
Unpacking preview-latex-style (11.91-2ubuntu2) …
Selecting previously unselected package t1utils.
Preparing to unpack …/43-t1utils_1.41-3_amd64.deb …
Unpacking t1utils (1.41-3) …
Selecting previously unselected package teckit.
Preparing to unpack …/44-teckit_2.5.8+ds2-5ubuntu2_amd64.deb …
Unpacking teckit (2.5.8+ds2-5ubuntu2) …
Selecting previously unselected package tex-gyre.
Preparing to unpack …/45-tex-gyre_20180621-3_all.deb …
Unpacking tex-gyre (20180621-3) …
Selecting previously unselected package texlive-binaries.
Preparing to unpack …/46-texlive-
binaries_2019.20190605.51237-3build2_amd64.deb …
Unpacking texlive-binaries (2019.20190605.51237-3build2) …
Selecting previously unselected package texlive-base.
Preparing to unpack …/47-texlive-base_2019.20200218-1_all.deb …
Unpacking texlive-base (2019.20200218-1) …
Selecting previously unselected package texlive-fonts-recommended.
Preparing to unpack …/48-texlive-fonts-recommended_2019.20200218-1_all.deb …
Unpacking texlive-fonts-recommended (2019.20200218-1) …
Selecting previously unselected package texlive-latex-base.
Preparing to unpack …/49-texlive-latex-base_2019.20200218-1_all.deb …
Unpacking texlive-latex-base (2019.20200218-1) …
Selecting previously unselected package libfontbox-java.
Preparing to unpack …/50-libfontbox-java_1%3a1.8.16-2_all.deb …
Unpacking libfontbox-java (1:1.8.16-2) …
Selecting previously unselected package libpdfbox-java.
Preparing to unpack …/51-libpdfbox-java_1%3a1.8.16-2_all.deb …
Unpacking libpdfbox-java (1:1.8.16-2) …
Selecting previously unselected package texlive-latex-recommended.
Preparing to unpack …/52-texlive-latex-recommended_2019.20200218-1_all.deb …
Unpacking texlive-latex-recommended (2019.20200218-1) …
Selecting previously unselected package texlive-pictures.
Preparing to unpack …/53-texlive-pictures_2019.20200218-1_all.deb …
Unpacking texlive-pictures (2019.20200218-1) …
Selecting previously unselected package texlive-latex-extra.
Preparing to unpack …/54-texlive-latex-extra_2019.202000218-1_all.deb …
Unpacking texlive-latex-extra (2019.202000218-1) …
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Selecting previously unselected package texlive-plain-generic.
Preparing to unpack …/55-texlive-plain-generic_2019.202000218-1_all.deb …
Unpacking texlive-plain-generic (2019.202000218-1) …
Selecting previously unselected package tipa.
Preparing to unpack …/56-tipa_2%3a1.3-20_all.deb …
Unpacking tipa (2:1.3-20) …
Selecting previously unselected package texlive-xetex.
Preparing to unpack …/57-texlive-xetex_2019.20200218-1_all.deb …
Unpacking texlive-xetex (2019.20200218-1) …
Setting up javascript-common (11) …
Setting up libharfbuzz-icu0:amd64 (2.6.4-1ubuntu4.2) …
Setting up fonts-lato (2.0-2) …
Setting up fonts-noto-mono (20200323-1build1~ubuntu20.04.1) …
Setting up libwoff1:amd64 (1.0.2-1build2) …
Setting up ruby-power-assert (1.1.7-1) …
Setting up libtexlua53:amd64 (2019.20190605.51237-3build2) …
Setting up libijs-0.35:amd64 (0.35-15) …
Setting up libtexluajit2:amd64 (2019.20190605.51237-3build2) …
Setting up libfontbox-java (1:1.8.16-2) …
Setting up rubygems-integration (1.16) …
Setting up libzzip-0-13:amd64 (0.13.62-3.2ubuntu1) …
Setting up fonts-urw-base35 (20170801.1-3) …
Setting up poppler-data (0.4.9-2) …
Setting up ruby-minitest (5.13.0-1) …
Setting up tex-common (6.13) …
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line
76.)
debconf: falling back to frontend: Readline
update-language: texlive-base not installed and configured, doing nothing!
Setting up libfontenc1:amd64 (1:1.1.4-0ubuntu1) …
Setting up ruby-test-unit (3.3.5-1) …
Setting up libjbig2dec0:amd64 (0.18-1ubuntu1) …
Setting up libidn11:amd64 (1.33-2.2ubuntu2) …
Setting up libteckit0:amd64 (2.5.8+ds2-5ubuntu2) …
Setting up libapache-pom-java (18-1) …
Setting up ruby-net-telnet (0.1.1-2) …
Setting up xfonts-encodings (1:1.0.5-0ubuntu1) …
Setting up t1utils (1.41-3) …
Setting up fonts-texgyre (20180621-3) …
Setting up libkpathsea6:amd64 (2019.20190605.51237-3build2) …
Setting up fonts-lmodern (2.004.5-6) …
Setting up fonts-droid-fallback (1:6.0.1r16-1.1) …
Setting up libjs-jquery (3.3.1~dfsg-3) …
Setting up ruby-xmlrpc (0.3.0-2) …
Setting up libsynctex2:amd64 (2019.20190605.51237-3build2) …
Setting up libgs9-common (9.50~dfsg-5ubuntu4.7) …
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Setting up teckit (2.5.8+ds2-5ubuntu2) …
Setting up libpdfbox-java (1:1.8.16-2) …
Setting up libgs9:amd64 (9.50~dfsg-5ubuntu4.7) …
Setting up preview-latex-style (11.91-2ubuntu2) …
Setting up libcommons-parent-java (43-1) …
Setting up dvisvgm (2.8.1-1build1) …
Setting up libcommons-logging-java (1.2-2) …
Setting up xfonts-utils (1:7.7+6) …
Setting up libptexenc1:amd64 (2019.20190605.51237-3build2) …
Setting up texlive-binaries (2019.20190605.51237-3build2) …
update-alternatives: using /usr/bin/xdvi-xaw to provide /usr/bin/xdvi.bin
(xdvi.bin) in auto mode
update-alternatives: using /usr/bin/bibtex.original to provide /usr/bin/bibtex
(bibtex) in auto mode
Setting up lmodern (2.004.5-6) …
Setting up texlive-base (2019.20200218-1) …
mktexlsr: Updating /var/lib/texmf/ls-R-TEXLIVEDIST…
mktexlsr: Updating /var/lib/texmf/ls-R-TEXMFMAIN…
mktexlsr: Updating /var/lib/texmf/ls-R…
mktexlsr: Done.
tl-paper: setting paper size for dvips to a4:
/var/lib/texmf/dvips/config/config-paper.ps
tl-paper: setting paper size for dvipdfmx to a4:
/var/lib/texmf/dvipdfmx/dvipdfmx-paper.cfg
tl-paper: setting paper size for xdvi to a4: /var/lib/texmf/xdvi/XDvi-paper
tl-paper: setting paper size for pdftex to a4:
/var/lib/texmf/tex/generic/config/pdftexconfig.tex
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line
76.)
debconf: falling back to frontend: Readline
Setting up tex-gyre (20180621-3) …
Setting up texlive-plain-generic (2019.202000218-1) …
Setting up texlive-latex-base (2019.20200218-1) …
Setting up texlive-latex-recommended (2019.20200218-1) …
Setting up texlive-pictures (2019.20200218-1) …
Setting up texlive-fonts-recommended (2019.20200218-1) …
Setting up tipa (2:1.3-20) …
Regenerating '/var/lib/texmf/fmtutil.cnf-DEBIAN'… done.
Regenerating '/var/lib/texmf/fmtutil.cnf-TEXLIVEDIST'… done.
update-fmtutil has updated the following file(s):
        /var/lib/texmf/fmtutil.cnf-DEBIAN
        /var/lib/texmf/fmtutil.cnf-TEXLIVEDIST
If you want to activate the changes in the above file(s),
you should run fmtutil-sys or fmtutil.
Setting up texlive-latex-extra (2019.202000218-1) …
Setting up texlive-xetex (2019.20200218-1) …
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Setting up rake (13.0.1-4) …
Setting up libruby2.7:amd64 (2.7.0-5ubuntu1.10) …
Setting up ruby2.7 (2.7.0-5ubuntu1.10) …
Setting up ruby (1:2.7+1) …
Processing triggers for fontconfig (2.13.1-2ubuntu3) …
Processing triggers for mime-support (3.64ubuntu1) …
Processing triggers for libc-bin (2.31-0ubuntu9.9) …
Processing triggers for man-db (2.9.1-1) …
Processing triggers for tex-common (6.13) …
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line
76.)
debconf: falling back to frontend: Readline
Running updmap-sys. This may take some time… done.
Running mktexlsr /var/lib/texmf … done.
Building format(s) --all.
        This may take some time… done.
```