

Grupo 19

Guilherme Goes Arjona - 822146232

Andrey de Oliveira Cavalcante - 821231127

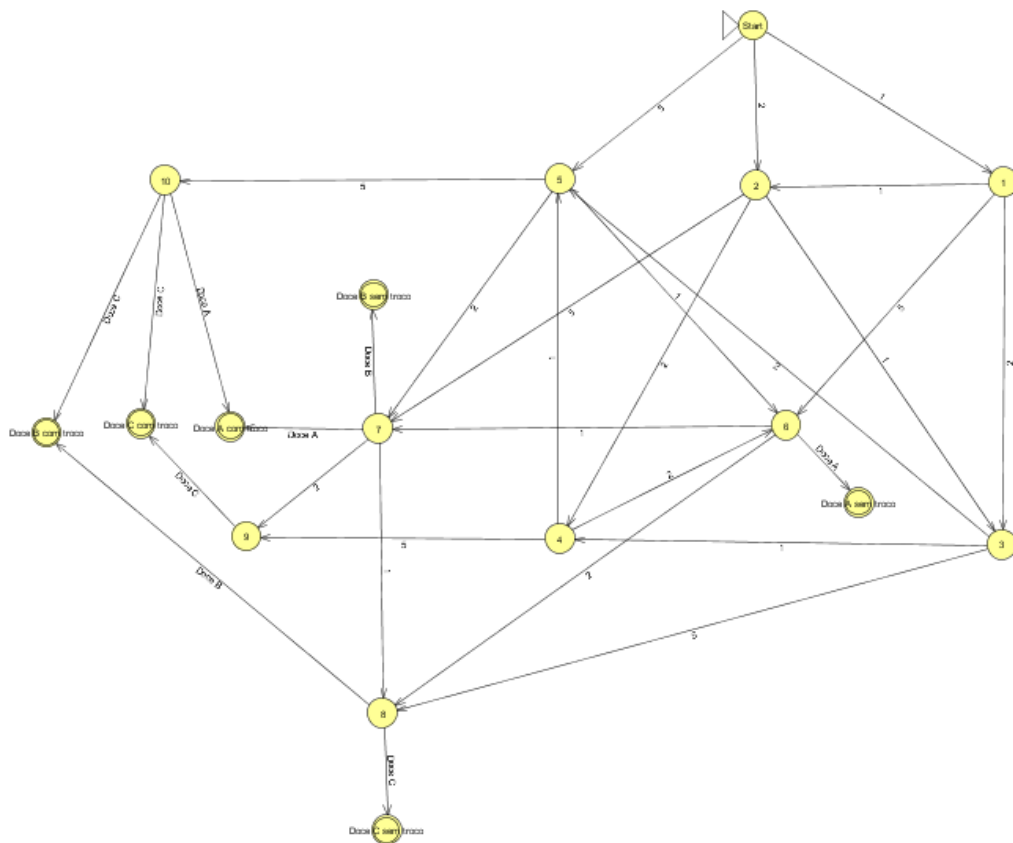
Breno Sganzerla - 822144984

Matheus Afonso Batista - 822154497

Fernando Fukunaga Sant'Anna - 821232457

Enrico Sganzerla – 824214414

Desenho do autômato



CÓDIGO AUTOMATO

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?><!--Created with JFLAP 7.1.-->
<structure>#13;

  <type>fa</type>#13;

  <automaton>#13;

    <!--The list of states.-->#13;

    <state id="0" name="Start">#13;

      <x>1289.0</x>#13;

      <y>452.0</y>#13;

      <initial/>#13;

    </state>#13;

    <state id="1" name="1">#13;

      <x>1629.0</x>#13;

      <y>665.0</y>#13;

    </state>#13;

    <state id="2" name="2">#13;

      <x>1293.0</x>#13;

      <y>669.0</y>#13;

    </state>#13;

    <state id="3" name="3">#13;

      <x>1627.0</x>#13;

      <y>1157.0</y>#13;

    </state>#13;

    <state id="4" name="4">#13;

      <x>1027.0</x>#13;

      <y>1149.0</y>#13;

    </state>#13;

    <state id="5" name="5">#13;

      <x>1027.0</x>#13;

      <y>660.0</y>#13;
```

```
</state>&#13;
<state id="6" name="6">&#13;
    <x>1334.0</x>&#13;
    <y>995.0</y>&#13;
</state>&#13;
<state id="7" name="7">&#13;
    <x>780.0</x>&#13;
    <y>999.0</y>&#13;
</state>&#13;
<state id="8" name="8">&#13;
    <x>786.0</x>&#13;
    <y>1386.0</y>&#13;
</state>&#13;
<state id="9" name="9">&#13;
    <x>601.0</x>&#13;
    <y>1146.0</y>&#13;
</state>&#13;
<state id="10" name="Doce A sem troco">&#13;
    <x>1433.0</x>&#13;
    <y>1100.0</y>&#13;
    <final/>&#13;
</state>&#13;
<state id="11" name="Doce A com troco">&#13;
    <x>579.0</x>&#13;
    <y>997.0</y>&#13;
    <final/>&#13;
</state>&#13;
<state id="12" name="Doce B sem troco">&#13;
    <x>774.0</x>&#13;
    <y>818.0</y>&#13;
    <final/>&#13;
```

```

</state>&#13;
<state id="13" name="Doce B com troco">&#13;
    <x>330.0</x>&#13;
    <y>1005.0</y>&#13;
    <final/>&#13;
</state>&#13;
<state id="14" name="Doce C sem troco">&#13;
    <x>792.0</x>&#13;
    <y>1545.0</y>&#13;
    <final/>&#13;
</state>&#13;
<state id="15" name="Doce C com troco">&#13;
    <x>458.0</x>&#13;
    <y>993.0</y>&#13;
    <final/>&#13;
</state>&#13;
<state id="16" name="10">&#13;
    <x>491.0</x>&#13;
    <y>662.0</y>&#13;
</state>&#13;
<!--The list of transitions.-->&#13;
<transition>&#13;
    <from>5</from>&#13;
    <to>16</to>&#13;
    <read>5</read>&#13;
</transition>&#13;
<transition>&#13;
    <from>2</from>&#13;
    <to>7</to>&#13;
    <read>5</read>&#13;
</transition>&#13;

```

```
<transition>#13;
    <from>4</from>#13;
    <to>5</to>#13;
    <read>1</read>#13;
</transition>#13;
<transition>#13;
    <from>16</from>#13;
    <to>15</to>#13;
    <read>Doce C</read>#13;
</transition>#13;
<transition>#13;
    <from>2</from>#13;
    <to>4</to>#13;
    <read>2</read>#13;
</transition>#13;
<transition>#13;
    <from>3</from>#13;
    <to>4</to>#13;
    <read>1</read>#13;
</transition>#13;
<transition>#13;
    <from>3</from>#13;
    <to>8</to>#13;
    <read>5</read>#13;
</transition>#13;
<transition>#13;
    <from>5</from>#13;
    <to>7</to>#13;
    <read>2</read>#13;
</transition>#13;
<transition>#13;
```

<from>9</from>
<to>15</to>
<read>Doce C</read>
</transition>
<transition>
<from>0</from>
<to>1</to>
<read>1</read>
</transition>
<transition>
<from>1</from>
<to>3</to>
<read>2</read>
</transition>
<transition>
<from>8</from>
<to>14</to>
<read>Doce C</read>
</transition>
<transition>
<from>5</from>
<to>6</to>
<read>1</read>
</transition>
<transition>
<from>1</from>
<to>2</to>
<read>1</read>
</transition>
<transition>
<from>7</from>

```

        <to>9</to>&#13;
        <read>2</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>6</from>&#13;
        <to>7</to>&#13;
        <read>1</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>16</from>&#13;
        <to>11</to>&#13;
        <read>Doce A</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>7</from>&#13;
        <to>12</to>&#13;
        <read>Doce B</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>7</from>&#13;
        <to>11</to>&#13;
        <read>Doce A</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>4</from>&#13;
        <to>6</to>&#13;
        <read>2</read>&#13;
    </transition>&#13;
    <transition>&#13;
        <from>6</from>&#13;
        <to>8</to>&#13;

```

<read>2</read>
</transition>
<transition>
 <from>8</from>
 <to>13</to>
 <read>Doce B</read>
</transition>
<transition>
 <from>4</from>
 <to>9</to>
 <read>5</read>
</transition>
<transition>
 <from>2</from>
 <to>3</to>
 <read>1</read>
</transition>
<transition>
 <from>6</from>
 <to>10</to>
 <read>Doce A</read>
</transition>
<transition>
 <from>0</from>
 <to>2</to>
 <read>2</read>
</transition>
<transition>
 <from>16</from>
 <to>13</to>
 <read>Doce C</read>


```
</transition>#13;
<transition>#13;
    <from>0</from>#13;
    <to>5</to>#13;
    <read>5</read>#13;
</transition>#13;
<transition>#13;
    <from>1</from>#13;
    <to>6</to>#13;
    <read>5</read>#13;
</transition>#13;
<transition>#13;
    <from>7</from>#13;
    <to>8</to>#13;
    <read>1</read>#13;
</transition>#13;
<transition>#13;
    <from>3</from>#13;
    <to>5</to>#13;
    <read>2</read>#13;
</transition>#13;
</automaton>#13;
</structure>
```

Código Front operacional:

```
<!DOCTYPE html>
<html lang="pt-BR">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Máquina de Doces</title>
  <style>
    @import
url('https://fonts.googleapis.com/css2?family=Poppins:wght@400;600;700&di
splay=swap');

    body {
      font-family: 'Poppins', sans-serif;
      display: flex;
      justify-content: center;
      align-items: center;
      min-height: 100vh;
      margin: 0;
      background-image: url('https://mipetit.com.br/wp-
content/uploads/2019/10/img_foto-blog-011.jpg');
      background-size: cover;
      background-position: center;
      background-attachment: fixed;
    }

    .vending-machine {
      background: linear-gradient(145deg, #e63946, #d62839);
      padding: 30px;
      border-radius: 20px;
      box-shadow: 0 10px 30px rgba(0, 0, 0, 0.5),
        inset 0 0 20px rgba(255, 255, 255, 0.2);
      width: 320px;
      text-align: center;
      border: 8px solid #333;
      position: relative;
    }

    .vending-machine:before {
      content: "";
      position: absolute;
      top: -15px;
      left: -15px;
      right: -15px;
```

```
        bottom: -15px;
        border: 3px solid rgba(255, 255, 255, 0.3);
        border-radius: 28px;
        pointer-events: none;
    }

    h1 {
        color: white;
        margin: 0 0 20px 0;
        text-shadow: 2px 2px 4px rgba(0, 0, 0, 0.5);
        font-size: 28px;
    }

    .balance-display {
        background: #333;
        color: #f1faee;
        padding: 15px;
        border-radius: 10px;
        margin-bottom: 20px;
        font-size: 18px;
        box-shadow: inset 0 0 10px rgba(0, 0, 0, 0.5);
        border: 3px solid #f1faee;
    }

    .money-btns, .candy-btns {
        margin: 20px 0;
        display: flex;
        flex-wrap: wrap;
        justify-content: center;
        gap: 10px;
    }

    .money-btn {
        width: 80px;
        height: 40px;
        border-radius: 5px;
        font-weight: bold;
        display: flex;
        align-items: center;
        justify-content: center;
        transition: transform 0.2s;
        box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
        border: none;
        cursor: pointer;
    }

    .money-btn:hover {
        transform: translateY(-3px);
    }
}
```

```
.money-btn:active {
  transform: translateY(1px);
}

.btn-1real {
  background: linear-gradient(135deg, #FFD700, #D4AF37);
  color: #333;
}

.btn-2real {
  background: linear-gradient(135deg, #C0C0C0, #A8A8A8);
  color: #333;
}

.btn-5real {
  background: linear-gradient(135deg, #8B4513, #A0522D);
  color: white;
}

.candy-btn {
  padding: 12px;
  margin: 5px;
  border: none;
  border-radius: 50px;
  cursor: pointer;
  transition: all 0.3s;
  font-weight: bold;
  width: 120px;
  box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
  position: relative;
  overflow: hidden;
}

.candy-btn:before {
  content: "";
  position: absolute;
  top: -10px;
  left: -10px;
  right: -10px;
  bottom: -10px;
  background: radial-gradient(circle, rgba(255,255,255,0.8) 0%,
    rgba(255,255,255,0) 70%);
  opacity: 0;
  transition: opacity 0.3s;
}

.candy-btn:hover:before {
  opacity: 0.3;
}
```

```
}

.candy-btn:disabled {
  background: #cccccc !important;
  cursor: not-allowed;
  color: #666;
  box-shadow: none;
}

.candy-btn:disabled:before {
  display: none;
}

#candyA {
  background: linear-gradient(135deg, #FF9E9E, #FF6B6B);
  color: white;
}

#candyB {
  background: linear-gradient(135deg, #A0E7E5, #4ECDC4);
  color: white;
}

#candyC {
  background: linear-gradient(135deg, #B5EAD7, #82D8A0);
  color: white;
}

.output {
  margin-top: 25px;
  padding: 15px;
  border-radius: 10px;
  background-color: rgba(255, 255, 255, 0.9);
  min-height: 50px;
  display: flex;
  align-items: center;
  justify-content: center;
  font-size: 16px;
  box-shadow: inset 0 0 10px rgba(0, 0, 0, 0.1);
  border: 2px solid #f1faee;
}

.coin-slot {
  width: 40px;
  height: 10px;
  background: #333;
  margin: 10px auto;
  border-radius: 5px;
  box-shadow: inset 0 0 5px rgba(0, 0, 0, 0.5);
}
```



```

</div>

<script>
  let currentBalance = 0;

  function formatCurrency(value) {
    return value.toFixed(2).replace('.', ',');
  }

  function updateUI() {
    document.getElementById('currentBalance').textContent = `R$
    ${formatCurrency(currentBalance)}`;
    document.getElementById('candyA').disabled = currentBalance <
6;
    document.getElementById('candyB').disabled = currentBalance <
7;
    document.getElementById('candyC').disabled = currentBalance <
8;
  }

  function insertMoney(amount) {
    currentBalance += amount;
    updateUI();

    let moneyName = '';
    if (amount === 1) moneyName = 'uma moeda de R$ 1,00';
    else if (amount === 2) moneyName = 'uma nota de R$ 2,00';
    else moneyName = 'uma nota de R$ 5,00';

    document.getElementById('output').textContent = `Você inseriu
    ${moneyName}`;

    // Efeito sonoro simulado (seria melhor com um arquivo de som
    real)
    console.log('Som de moeda caindo: clink!');
  }

  function buyCandy(candy, price) {
    if (currentBalance >= price) {
      let change = currentBalance - price;
      currentBalance = 0;
      updateUI();

      let candyName = '';
      let candyEmoji = '';
      if (candy === 'A') {
        candyName = 'Pirulito';
        candyEmoji = '🍭';
      } else if (candy === 'B') {

```

```
        candyName = 'Kinder Ovo';
        candyEmoji = '🍫';
    } else {
        candyName = 'Chocolate';
        candyEmoji = '🍫';
    }

    let message = `${candyEmoji} Você comprou ${candyName}!
    ${candyEmoji}`;
    if (change > 0) {
        message += ` Seu troco é de R$
    ${formatCurrency(change)}.`;
    } else {
        message += ' Sem troco.';
    }

    document.getElementById('output').textContent = message;

    // Efeito sonoro simulado
    console.log('Som de doce caindo: clunk!');
} else {
    document.getElementById('output').textContent = 'Saldo
insuficiente. Por favor, insira mais dinheiro.';
}
}

    updateUI();
</script>
</body>
</html>
```