***Сапегина Екатерина Игоревна, Вариант №12***

**Регулярное выражение:**

proc(□)+ (start(cos(y\*)+sin(x+ )))\*□+end

□ – обозначение пробела

**Пусть:** proc - **p**,□ - **a**, end - **e**, start - **s**, cos - **o**, sin - **i**;

p(a)+ (s(o(y\*)+i(x+)))\*a+e

**Цепочки символов**, принадлежащих регулярному множеству:

1) proc(□)□end (paae)

2) proc(□□)(start(sin(x )))□□end (paasixaae)

3) proc(□□□) (start(cos(y)))□□□end (paaasoyaaae)

4) proc(□□□□) (start(sin(xx )))□□□□end (paaaasixxaaaae)

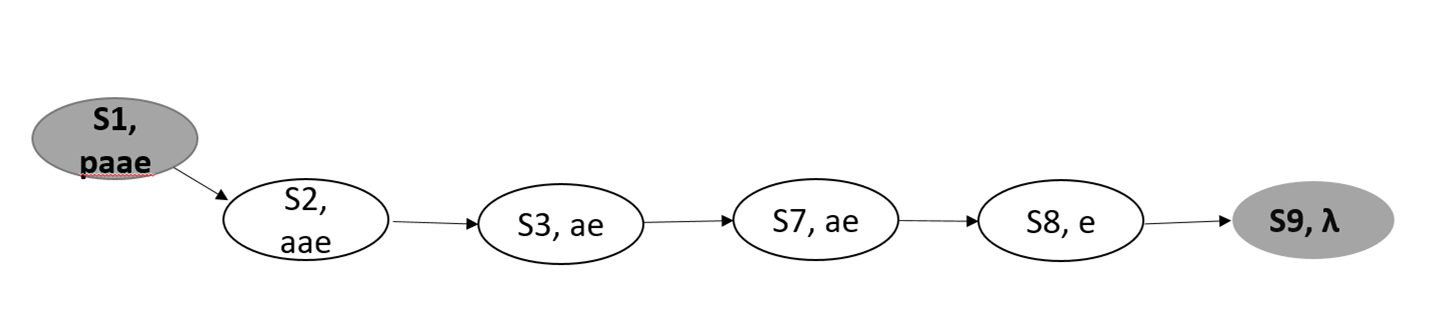
5) proc(□□□□□) (start(cos(yy)))□□□□□end (paaaaasoyyaaaaae)

6) proc(□□□□□□) (start(sin(xxx)))□□□□□□end (paaaaaasixxxaaaaaae)

7) proc(□□□□□□□) (start(cos(yyy)))□□□□□□□end (paaaaaaasoyyyaaaaaaae)

Возьмем цепочку ***paae*** (№1)

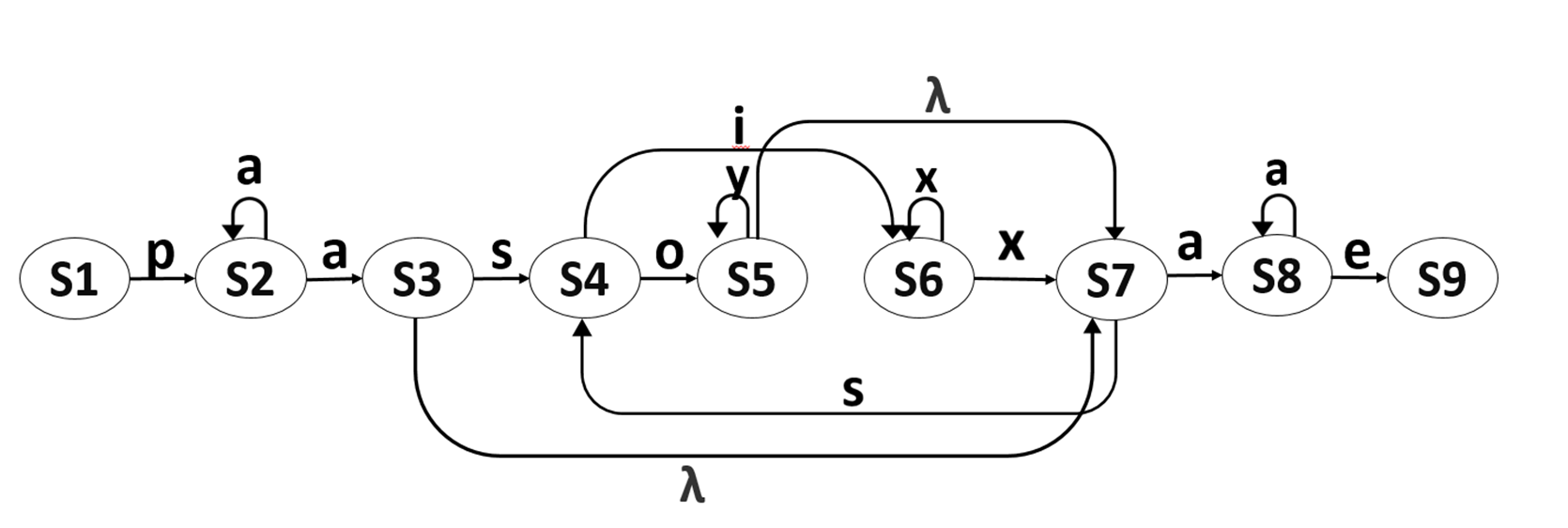
paae -> aae -> ae -> e -> λ



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ***p*** | ***a*** | ***e*** | **λ** |
| ***S1*** | S2 | Ø | Ø | Ø |
| ***S2*** | Ø | S3 | Ø | Ø |
| ***S3*** | Ø | Ø | Ø | S7 |
| ***S7*** | Ø | S8 | Ø | Ø |
| ***S8*** | Ø | Ø | S9 | Ø |

**Граф конечного автомата**

**p(a)+ (s(o(y\*)+i(x+)))\*a+e**



**Для 12 лабораторной:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **p** | **a** | **e** | **s** | **o** | **i** | **y** | **x** | **λ** |
| **S1** | 2 |  | Ø | Ø | Ø | Ø | Ø | Ø | Ø |
| **S2** | Ø | 2, 3 | Ø | Ø | Ø | Ø | Ø | Ø | Ø |
| **S3** | Ø | 7 | Ø | 4 | Ø | Ø | Ø | Ø |  |
| **S4** | Ø | Ø | Ø | Ø | 5 | 6 | Ø | Ø | Ø |
| **S5** | Ø | 7 | Ø | Ø | Ø | Ø | 5 | Ø |  |
| **S6** | Ø | Ø | Ø | Ø | Ø | Ø | Ø | 6,7 | Ø |
| **S7** | Ø | 7 | 8 | 4 | Ø | Ø | Ø |  | Ø |
| **S8** | Ø | 8 | 9 | Ø | Ø | Ø | Ø | Ø | Ø |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **p** | **a** | **e** | **s** | **o** | **i** | **y** | **x** | **λ** |
| **S1** | S2 | Ø | Ø | Ø | Ø | Ø | Ø | Ø | Ø |
| **S2** | Ø | S2, S3 | Ø | Ø | Ø | Ø | Ø | Ø | Ø |
| **S3** | Ø | Ø | Ø | S4 | Ø | Ø | Ø | Ø | S7 |
| **S4** | Ø | Ø | Ø | Ø | S5 | S6 | Ø | Ø | Ø |
| **S5** | Ø | Ø | Ø | Ø | Ø | Ø | S5 | Ø | S7 |
| **S6** | Ø | Ø | Ø | Ø | Ø | Ø | Ø | S6,S7 | Ø |
| **S7** | Ø | S8 | Ø | S4 | Ø | Ø | Ø | Ø | Ø |
| **S8** | Ø | S8 | S9 | Ø | Ø | Ø | Ø | Ø | Ø |