**Maria Eloisa P. Ganados 479308**

**BSCpE-4**

1. **L={w Є {a,b} \*| w contains at most occurrences of 5 b}**

q0

**b b b b b**

q4

q1

q2

q3

q5

**a**

**a a a a a b**

q6

**a,b**

Q=q0,q1,q2,q3,q4,q5,q6

Initial State=q0

Accept State={q0},{q1},{q2},{q3},{q4},{q5}

|  |  |  |
| --- | --- | --- |
| **q** | **a** | **b** |
| 0 | 0 | 1 |
| 1 | 1 | 2 |
| 2 | 2 | 3 |
| 3 | 3 | 4 |
| 4 | 4 | 5 |
| 5 | 5 | 6 |
| 6 | 6 | 6 |

#include<iostream>

using namespace std;

int main ()

{

int j=0, state=0;

int table [7][2] = { {0,1},{1,2},{2,3},{3,4},{4,5},{5,6},{6,6}};

int input;

int flag=0;

char st[100];

cin>>st;

while (st[j] !='\0')

{

switch (st[j])

{

case 'a' : input=0;break;

case 'b' : input=1;break;

}

state = table [state][input];

if(state==0){flag=1;}

if(state==1){flag=1;}

if(state==2){flag=1;}

if(state==3){flag=1;}

if(state==4){flag=1;}

if(state==5){flag=1;}

if(state==6){flag=0;break;}

j++;

}

if (flag==0) {cout<<"Not Accepted";}

else {cout<<"Accepted";}

return 0;

}