Q1.

<menu>

<id>file</id>

<value>File</value>

<popup>

<menuitem>

<value>New</value>

<onclick>CreateNewDoc()</onclick>

</menuitem>

<menuitem>

<value>Open</value>

<onclick>OpenDoc()</onclick>

</menuitem>

<menuitem>

<value>Close</value>

<onclick>CloseDoc()</onclick>

</menuitem>

</popup>

</menu>

{

"configuration-file": {

"section": [

{

"name": "section1",

"entry": [

{

"name": "name1",

"value": "value1"

},

{

"name": "name2",

"value": "value2"

}

]

},

{

"name": "section2",

"entry": {

"name": "someothername",

"value": "someothervalue"

}

}

]

}

}

Q2.

Bucket 0 (Crick, Wu, Califieri)

Bucket 1 (Kim, Singh )

Bucket 2 (Srinivasan, Katz, ElSaid, Gold)

Bucket 3 (Brandt, Mozart, Einstein)

Crick (492) -> 0

Srinivasan (1054) -> 2

Katz (410) -> 2

Brandt (604) -> 3

Kim (289) -> 1

Wu (204) -> 0

Singh (505) -> 1

ElSaid (562) ->2

Califieri (904) -> 0

Mozart (523) -> 3

Einstein (831) -> 3

Gold (390) -> 2

Q3.

1. First execution

∏ name (σ S.sid = R.sid ^ B.isbn = R.isbn ^ B.author = “Shakespeare” ^ S.age > 15 ^ S.age < 20 (S X R X B) )

1. Second execution

∏ name ((RENAME r\_s (σ B.isbn = R.isbn ^ B.author = “Shakespeare” (R X S)) r\_s **⋈**  r\_s.sid = S.sid (σ S.age > 15 ^ S.age < 20 (S)))