CPE 348 Project 2

Part 1a

[C++ Code is attached in Canvas]

Program Output

```
-------------------------------------------------
Checking time slot: 0
Station 0: backing off to slot 1  collisions: 1
Station 1: backing off to slot 2  collisions: 1
Station 2: backing off to slot 2  collisions: 1
Station 3: backing off to slot 1  collisions: 1
Station 4: backing off to slot 1  collisions: 1
Station 5: backing off to slot 1  collisions: 1
-------------------------------------------------

-------------------------------------------------
Checking time slot: 1
Station 0: backing off to slot 5  collisions: 2
Station 3: backing off to slot 2  collisions: 2
Station 4: backing off to slot 4  collisions: 2
Station 5: backing off to slot 2  collisions: 2
-------------------------------------------------

-------------------------------------------------
Checking time slot: 2
Station 1: backing off to slot 6  collisions: 2
Station 2: backing off to slot 5  collisions: 2
Station 3: backing off to slot 7  collisions: 3
Station 5: backing off to slot 3  collisions: 3
-------------------------------------------------

-------------------------------------------------
Checking time slot: 3
Station 5 has successfully transmitted
in slot number 3, which is 153.6 microseconds
```

Part 1b

[C++ Code is attached in Canvas]

Program Output

```
-------------------------------------------------
Checking time slot: 0
-  Station 0: backing off to slot 1  collisions: 1
-  Station 1: backing off to slot 2  collisions: 1
-  Station 2: backing off to slot 2  collisions: 1
-  Station 3: backing off to slot 1  collisions: 1
-  Station 4: backing off to slot 1  collisions: 1
-  Station 5: backing off to slot 1  collisions: 1
-------------------------------------------------


-------------------------------------------------
Checking time slot: 1
-  Station 0: backing off to slot 5  collisions: 2
-  Station 3: backing off to slot 2  collisions: 2
-  Station 4: backing off to slot 4  collisions: 2
-  Station 5: backing off to slot 2  collisions: 2
-------------------------------------------------


-------------------------------------------------
Checking time slot: 2
-  Station 1: backing off to slot 6  collisions: 2
-  Station 2: backing off to slot 5  collisions: 2
-  Station 3: backing off to slot 7  collisions: 3
-  Station 5: backing off to slot 3  collisions: 3
-------------------------------------------------


-------------------------------------------------
Checking time slot: 3
*  Station 5 has successfully transmitted
   in slot number 3, which is 153.6 microseconds
-------------------------------------------------


-------------------------------------------------
```

```
Checking time slot: 4
*  Station 4 has successfully transmitted
   in slot number 4, which is 204.8 microseconds
--------------------------------------------------


--------------------------------------------------
Checking time slot: 5
-  Station 0: backing off to slot 8  collisions: 3
-  Station 2: backing off to slot 7  collisions: 3
--------------------------------------------------


--------------------------------------------------
Checking time slot: 6
*  Station 1 has successfully transmitted
   in slot number 6, which is 307.2 microseconds
--------------------------------------------------


--------------------------------------------------
Checking time slot: 7
-  Station 2: backing off to slot 11  collisions: 4
-  Station 3: backing off to slot 17  collisions: 4
--------------------------------------------------


--------------------------------------------------
Checking time slot: 8
*  Station 0 has successfully transmitted
   in slot number 8, which is 409.6 microseconds
--------------------------------------------------


--------------------------------------------------
Checking time slot: 9
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 10
X  no stations have transmitted in this slot
--------------------------------------------------
```

```
--------------------------------------------------
Checking time slot: 11
*  Station 2 has successfully transmitted
   in slot number 11, which is 563.2 microseconds
--------------------------------------------------


--------------------------------------------------
Checking time slot: 12
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 13
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 14
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 15
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 16
X  no stations have transmitted in this slot
--------------------------------------------------


--------------------------------------------------
Checking time slot: 17
*  Station 3 has successfully transmitted
   in slot number 17, which is 870.4 microseconds
--------------------------------------------------
```

Part 1c

[C++ Code is attached in Canvas]

Program Output

```
*  Station 2 has successfully transmitted
   in slot number 3, which is 153.6 microseconds
   current tx state [0:4]:    current tx state [0:4]: [0 0 1 0 0]

*  Station 0 has successfully transmitted
   in slot number 4, which is 204.8 microseconds
   current tx state [0:4]:    current tx state [0:4]: [1 0 1 0 0]

*  Station 1 has successfully transmitted
   in slot number 8, which is 409.6 microseconds
   current tx state [0:4]:    current tx state [0:4]: [1 1 1 0 0]

... (omitted long output) ...

*  Station 3 has successfully transmitted
   in slot number 10, which is 512.0 microseconds
   current tx state [0:4]:    current tx state [0:4]: [1 1 1 1 0]

... (omitted long output) ...

*  Station 4 has successfully transmitted
   in slot number 186, which is 9523.2 microseconds
   current tx state [0:4]:    current tx state [0:4]: [1 1 1 1 1]
```