Explanation of the result of the output:

As marked by the highlight part(red) of the output, when synchronized is not implemented, the method of thread 2 would be executed without waiting for the sleep() in thread 1. When synchronized is implemented, the synchronized method of thread 2 would not be executed until the same method in thread 1 finished
This illustrated the successful impelmentation of synchronized.

Output for Synchronized implemented:

Readin data from a file...

Print the model:
Name of the automobile: Ford Wagon ZTW
Base price of the automobile: 18445.0

  Option Set Name: Color
  Options:

    Name: Fort Knox Gold Clearcoat Metallic
    Price: 0.0

    Name: Liquid Grey Clearcoat Metallic
    Price: 0.0

    Name: Infra-Red Clearcoat
    Price: 0.0

    Name: Grabber Green Clearcoat Metallic
    Price: 0.0

    Name: Sangria Red Clearcoat Metallic
    Price: 0.0

    Name: French Blue Clearcoat Metallic
    Price: 0.0

    Name: Twilight Blue Clearcoat Metallic,
    Price: 0.0

Name: CD Silver Clearcoat Metallic
     Price: 0.0

     Name: Pitch Black Clearcoat
     Price: 0.0

     Name: Cloud 9 White Clearcoat
     Price: 0.0
~~~~~~
  Option Set Name: Transmission
  Options:

     Name: Automatic
     Price: 0.0

     Name: Standard
     Price: -815.0
~~~~~~
  Option Set Name: Brakes/Traction Control
  Options:

     Name: Standard
     Price: 0.0

     Name: ABS
     Price: 400.0

     Name: ABS with Advance Trac
     Price: 1625.0
~~~~~~
  Option Set Name: Side Impact Air Bags
  Options:

     Name: None
     Price: 0.0

     Name: Selected
     Price: 350.0
~~~~~~
  Option Set Name: Power Moonroof
  Options:

     Name: None

Price: 0.0

        Name: Selected:
        Price: 595.0
~~~~~~

Name of the automobile: Ford Wagon ZTW
Base price of the automobile: 18445.0

  Option Set Name: Transmission
  Options:

    Name: Automatic
    Price: 0.0
~~~~~~
  Option Set Name: Brakes/Traction Control
  Options:

    Name: Standard
    Price: 0.0

    Name: ABS
    Price: 400.0

    Name: ABS with Advance Trac
    Price: 1625.0
~~~~~~

Option Set Name: Side Impact Air Bags
    Options:

        Name: Selected
        Price: 350.0

Output for Synchronized not implemented:

Readin data from a file...

Print the model:
Name of the automobile: Ford Wagon ZTW
Base price of the automobile: 18445.0

  Option Set Name: Color
  Options:

      Name: Fort Knox Gold Clearcoat Metallic
      Price: 0.0

      Name: Liquid Grey Clearcoat Metallic
      Price: 0.0

      Name: Infra-Red Clearcoat
      Price: 0.0

      Name: Grabber Green Clearcoat Metallic
      Price: 0.0

      Name: Sangria Red Clearcoat Metallic
      Price: 0.0

      Name: French Blue Clearcoat Metallic
      Price: 0.0

      Name: Twilight Blue Clearcoat Metallic,
      Price: 0.0

      Name: CD Silver Clearcoat Metallic

Price: 0.0

Name: Pitch Black Clearcoat
Price: 0.0

Name: Cloud 9 White Clearcoat
Price: 0.0
~~~~~~
  Option Set Name: Transmission
  Options:

  Name: Automatic
  Price: 0.0

  Name: Standard
  Price: -815.0
~~~~~~
  Option Set Name: Brakes/Traction Control
  Options:

  Name: Standard
  Price: 0.0

  Name: ABS
  Price: 400.0

  Name: ABS with Advance Trac
  Price: 1625.0
~~~~~~
  Option Set Name: Side Impact Air Bags
  Options:

  Name: None
  Price: 0.0

  Name: Selected
  Price: 350.0
~~~~~~
  Option Set Name: Power Moonroof
  Options:

  Name: None
  Price: 0.0

Name: Selected:
    Price: 595.0
~~~~~~

Option Set Power Moonroof is deleted by Thread2.

The option Standard in option set Transmission is deleted by Thread2.

Started Thread
Now nothing is deleted since there is a sleep at the beginning of
thread1
Thread 2 is waiting for the synchronized part of thread 1 to finish

Option Set Color is deleted by Thread1.

The option None in option set Side Impact Air Bags is deleted by
Thread1.

Both thread1 and thread2 finished its deletion

Name of the automobile: Ford Wagon ZTW
Base price of the automobile: 18445.0

  Option Set Name: Transmission
  Options:

    Name: Automatic
    Price: 0.0
~~~~~~
  Option Set Name: Brakes/Traction Control
  Options:

    Name: Standard
    Price: 0.0

    Name: ABS
    Price: 400.0

    Name: ABS with Advance Trac
    Price: 1625.0
~~~~~~
  Option Set Name: Side Impact Air Bags

Options:

    Name: Selected
    Price: 350.0
~~~~~~