```
1) Define Stoream. Woulte a paragram to Copy the Content of file
   1 to file 2
(A) A stoream is a sequence of elements that can be powcessed
 in parallel (00) sequentially. It reports a pipline of data that
  can be operated upon to perform various transformations & computati
   onj.
  Hone
    Stoream allow for concise & exporesive code Especially when.
  working with conections
 Hore Some Key Characteristics
 1. sequence of clements
  2 functional operations,
 3. Lazines & short - circuiting
  4. pipelining.
  5. Inturmediate & tumin a
     operations
 prugiam :
      Imposit Tava: 10. File Readon;
      imposit Java. io. Filewsitor,
      imposit. Java. 10. JuEx ception,
      public class File Copy Example of
           public static void main (string args ())
                          SourceFile = "file 1. txt";
                  Storing
                  Storing destination File = "file 2' txt";
          try (File Reader reader = new File Reader (Source File);
                File Worlton woulter = new File worlton (destination File
                 int charactor;
                 while ((charactor = = reader . read()) ! =-1)
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Noniton . woulte ( (haracton) !
   system. out. paintin (" tile Copy successful");
   3
  catch (10 Exception e)
    4
      system out pountin ("An emon occurred during file Copy:"
                          + eigethersoge());
@ What is byte stoneam (binary Jo)? List out various classes
  and methods of byte storeams with an example. (File in put
   Stoream, Fileoutput stoream example paogram).
     Byte storeams also known as bloomy I/o storeams, are
(R)
      used for reading & woulding raw binoon data
   Byte streams we typically used when working with files.
   (DI) network. sockets where the data is toreated as a
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There are

sequence of byte.

File Input stream: - It is used to nead data forom a file as a sequence of bytes. It provides methods for reading data from file into a byte array (000 a single byte at a time.

File output stoream: It is used to write data to a file as a sequence of bytes. It posovides methods foor Worting data forom a byte array (00) a single byte at a bime

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Example:
   imposit iava. 10. File Input stream.
   impart java . 10. Ille output stoream;
   import java lo. Joexception:
   public class Byte stoream Example
     £
         public static void main (stering args [])
              Storing source File = "file 1. txt")
               storing destination file = "file 2 txt";
      tay (File Input Stream fis = new File Input Stoream (source File)
            rileoutput stoream for = new Fileoutput stoream
                                                (destination File))
          as a
             byte [] buffer = new byte [1024];
             inte bytes Read;
            while ((bytes Read = fis read (buffor)) = -1)
               e
                 fos. Write (buffer, o, byter Read);
              system.out.ponintln [11 File Copy successful");
            catch (Iotxception e)
              system out parinth (11 An esous occurred during
            f
                     file Copy: "+ e. get Hessage ());
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- (3) What is character stoream (Text IO) 1, list out Various classes & methods of character storeams with an eseample (File-reader).

  Filewriter example perogram).
  - (A) Character storeams also known as test 310 storeams are used for reading & worting character-based data: character storeams are typically used when working with text files (68) textual data.

Two commonly used classes for characters stoream Ilo are Filercades & Filewriter

File Reader: - It is used to read character data from a file. It provides methods from reading characters into character aways (000) reading a single character at a time Filewou'ter: It is used to write character data to a file It provides methods from writing characters from characters at a time.

program: - Imposit lava. 10. File Reader;
imposit lava. 10. File woulter;
imposit lava. 10. Io Exception;

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public class characterstreamExample

public static void main (storing is angs)

Storing councefile = "file 1. txt".

Storing destination file = "file 2. txt";

tory (File Reader seader = new File Reader (Source File);

File Noviter Worlton = new File Worlton (destination

File))

[ chan [] buffer = new thon[1024];

```
int chaousead
                while ((chousead = reader read (buff (17)) = -1)
                          d
                                          Worster Worste (buffer 10, chausead);
                             4
                          System. out paintin ["File copy successful!");
                      4.
                  catch (toexception e)
            1 9
                                         system out parintin (" An & error occurred during file
               Copy: 11 + e. gethersoge());
                         $$ - a fill the control opening the process process of the fill opening the same of the control opening the co
                     that have to the head gottokle to bills tall
                    it is the the following a some for the following strong strong is
                                                   Burden (A)
Esquiting.
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powgram :
     imposit Java:10- File Readon;
                                           5th question
     imposit Java. 10 . File woulton's
     imposit . Java · 10 · Julex ception;
     public class File copy example of
          public static roid main (string angs ())
                Storing SourceFile - "file 1. txt";
                 Storing destination File = "file 2' txt";
         try ( File Reader reader = new File Reader (Source File);
               File Worlton worlton = new File worlton (destination File
                int characton;
                while ( ( charactor = = reader . read ()) ! =-1)
                    5th question
                                                Scanned with OKEN Scanner
       Norten . worlte ((haratten);
```

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system. out. pointin (" tile copy successful");
catch (10 freeption e)
ુ ર્વ
    system out pountin (" An emon occurred during file Copy:"
                            eiget Hessage (1);
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grade total
4.
     Import Java io Buffered Reader;
      Impost java to Filereader;
      impost java- lo Fotxception;
public class File Content Reader
  2
     public static void main (storing angs (1)
   storing file path = "path 1 to 1 your I file txt";
  tay ( Buffered Reader reader = new Buffered reads
        r (new file Reader (file path))
                         Samo ) Films
          staring line;
        while (( line = reader. read line())! = null)
          system. out. pointln (line);
     catch (Totx ception e)
           er pount stack trace ();
            Ca ) with med som we asking
       3
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Diff blw Txt & binary Ilo.

Text Flo !-

- 1. Text Ilo is designed from handling test-based data such as character storings
- # It uses encoracted storeams to read & woulter
- \* Text Ilo assumes that the data is encoded using specific encodeter encoding.
- # It is sustable for reading & writing text files where data is expected to be human readble & editable

bin any I/o:

- \* Binary IIO is designed for handling saw binary data such as Images, audiofiles.
- as sequence of bytes.
- 3. Bin any Ilo treats the data as a stacam of bytes without any assumptions.
- 4. It 9s suitable for reading & worlting non text files (81) working with low level data.

