

```

    }
}

/*--- HW11.java ---*/
/*
class that uses the interface of the other classes.
Takes an input file and decides what kind of file it is
*/
public class HW11 {
    /*
    Main method for the class.
    */
    public static void main(String[] args) {
        //Creates new Categorizer object
        Categorizer C = new Categorizer();

        C.add(new RecogASCII());
        C.add(new RecogJPG());
        C.add(new RecogPDF());
        C.printCategories(System.in);
    }
}

/*--- RecogPDF.java ---*/
/*
Public class that recognizes PDF files.
Basically a plugin that adds on to functionality of RecogASCII
*/
public class RecogPDF extends RecogASCII
{
    /*
    data fields for the class. header contains the header for PDF files.
    If the header of the input file matches that of this header then the file is
    a PDF file.
    */
    private static char[] header = {'%', 'P', 'D', 'F'};
    private int i = 0;

    /*
    Returns that this class is searching for PDF files
    */
    public String getName()
    {
        return "PDF";
    }

    /*
    Actually does the checking of the header file
    */
    public void feed(int nextByte)
    {
        if(getState() == 2)
        {
            if((header[i] >= 0) && (nextByte != header[i]))
            {
                setState(0);
            }
        }
        i++;

        if((i > 3) && (getState() != 0))
            setState(1);
    }

    /*
    Returns whether the state is false or true. Telling if the file is PDF or not.
    */
    boolean decision()
    {
        return getState() == 1;
    }
}
```