



File Edit View

```
const fetchFileData = async () => {
  if (!fileId || !user) return;

  setIsLoading(true);
  try {
    // Fetch file
    const fileDoc = await getDoc(doc(db, 'files', fileId));

    if (!fileDoc.exists()) {
      setError('File not found');
      setIsLoading(false);
      return;
    }

    const fileData = { id: fileDoc.id, ...fileDoc.data() } as CodeFile;

    // Fetch project to check permissions
    const projectDoc = await getDoc(doc(db, 'projects', fileData.projectId));

    if (!projectDoc.exists()) {
      setError('Project not found');
      setIsLoading(false);
      return;
    }

    const projectData = projectDoc.data();

    // Check if user is owner or collaborator
    if (projectData.ownerId !== user.uid && !projectData.collaborators.includes(
      setError('You do not have access to this file');
      setIsLoading(false);
      return;
    }

    setFile(fileData);
    setEditorState(prev => ({
      ...prev,
      file: fileData,
      language: fileData.language as EditorLanguage
    }));

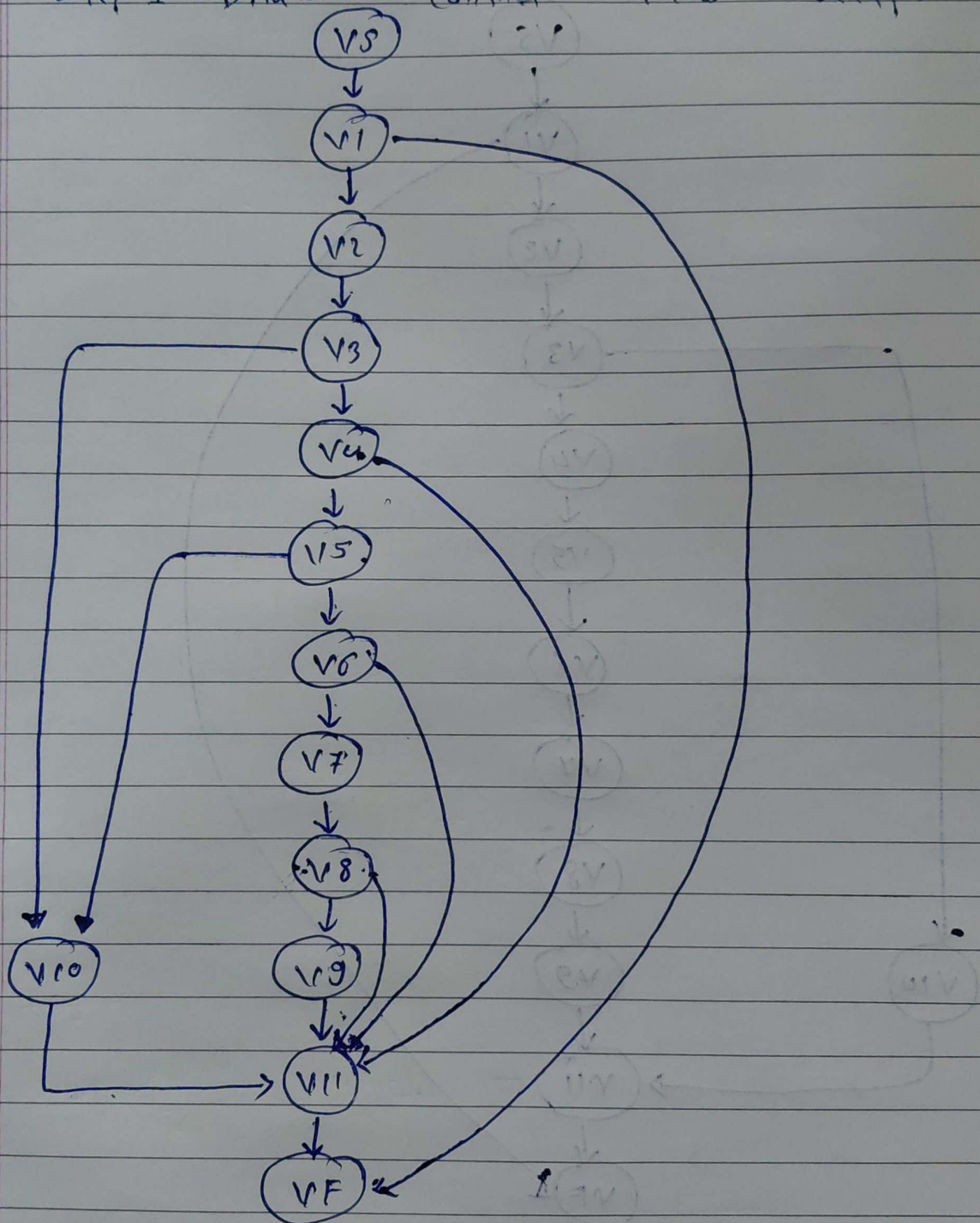
  } catch (error) {
    console.error('Error fetching file data:', error);
    setError('Failed to load file data');
  } finally {
    setIsLoading(false);
  }
};
```



25/10/25

# Experiment 4.

Step 1: Draw Control Flow Graph



Step 2: Calculate Cyclomatic Complexity

$$CC = \frac{P + 1}{G + 1} = 7$$

where P stands for predicate

TestCase#	Test Scenario	Test Cases	Test Data	Expected Result	Control paths executed	Actual Result	Pass/Fail
T1	NO Field ID or NO User	When Filed ID or User ID is NONE	Field ID=NONE User ID=NONE	END Function	(VS,V1),(V1,VF)	As Expected	PASS
T2	All correct data gained	File document obtained successfully, get project folder successfully, get ownership or collaborater id match in dataset successfully, data is set in variable for preview/display	All fields are present	Successful Execution of all true blocks	(VS,V1),(V1,V2),(V2,V3),(V3,V4),(V4,V5),(V5,V6),(V6,V7),(V7,V8),(V8,V9),(V9,V11),(V11,VF)	As Expected	PASS
T3	No Document received from backend	Incorrect Document	Document = NONE	Execute catch and finally block	(VS,V1),(V1,V2),(V2,V3),(V3,V10),(V10,V11),(V11,VF)	As Expected	PASS
T4	Document received but invalid id	Document does not exist in database	Document = not found	Execute catch and print error message "file not found" and finally block	(VS,V1),(V1,V2),(V2,V3),(V3,V4),(V4,V11),(V11,VF)	As Expected	PASS
T5	Fetch project to check the permission	File permission is not permitted	File permission not granted	Execute catch and print error message "failed to load file data" and finally block	(VS,V1),(V1,V2),(V2,V3),(V3,V4),(V4,V5),(V5,V10),(V10,V11),(V11,VF)	As Expected	PASS
T6	Project ID does not match in File	Project ID does not exist in the file	Project ID = invalid	Execute catch and print error message "project not found" and finally block	(VS,V1),(V1,V2),(V2,V3),(V3,V4),(V4,V5),(V5,V6),(V6,V11),(V11,VF)	As Expected	PASS
T7	Check if user is owner or collaborator	owner id = user id, collaboration file has userid or not	userid must be in not collaboration id file or userid must not be owner	Prints Error "You do not have access to this file"	(VS,V1),(V1,V2),(V2,V3),(V3,V4),(V4,V5),(V5,V6),(V6,V7),(V7,V8),(V8,V11),(V11,VF)	As Expected	PASS