Stored Procedure for Subject Change Requests

This stored procedure is designed to process student subject change requests in SQL Server. It checks the SubjectRequest table and updates the SubjectAllotments table based on whether a student has requested a new subject or not.

# Stored Procedure Code:

CREATE PROCEDURE dbo.usp\_ProcessSubjectChangeRequests  
AS  
BEGIN  
 SET NOCOUNT ON;   
 SET XACT\_ABORT ON;   
  
 BEGIN TRY  
 BEGIN TRANSACTION;  
  
 DECLARE   
 @StudentId INT,  
 @RequestedSubjectId INT,  
 @CurrentSubjectId INT;  
  
 DECLARE req\_cursor CURSOR FOR  
 SELECT StudentId, SubjectId  
 FROM dbo.SubjectRequest;  
  
 OPEN req\_cursor;  
 FETCH NEXT FROM req\_cursor INTO @StudentId, @RequestedSubjectId;  
  
 WHILE @@FETCH\_STATUS = 0  
 BEGIN  
 IF EXISTS (SELECT 1 FROM dbo.SubjectAllotments   
 WHERE StudentId = @StudentId AND Is\_Valid = 1)  
 BEGIN  
 SELECT @CurrentSubjectId = SubjectId  
 FROM dbo.SubjectAllotments  
 WHERE StudentId = @StudentId AND Is\_Valid = 1;  
  
 IF @CurrentSubjectId <> @RequestedSubjectId  
 BEGIN  
 UPDATE dbo.SubjectAllotments  
 SET Is\_Valid = 0  
 WHERE StudentId = @StudentId AND Is\_Valid = 1;  
  
 INSERT INTO dbo.SubjectAllotments (StudentId, SubjectId, Is\_Valid)  
 VALUES (@StudentId, @RequestedSubjectId, 1);  
 END  
 END  
 ELSE  
 BEGIN  
 INSERT INTO dbo.SubjectAllotments (StudentId, SubjectId, Is\_Valid)  
 VALUES (@StudentId, @RequestedSubjectId, 1);  
 END  
  
 FETCH NEXT FROM req\_cursor INTO @StudentId, @RequestedSubjectId;  
 END  
  
 CLOSE req\_cursor;  
 DEALLOCATE req\_cursor;  
  
 COMMIT TRANSACTION;  
 END TRY  
 BEGIN CATCH  
 IF @@TRANCOUNT > 0  
 ROLLBACK TRANSACTION;  
 THROW;  
 END CATCH  
END;