APEX MODULES CODES

MODULE: APEX TRIGGERS

```
1.Get Started with apex triggers:(AccountAddressTrigger)
trigger AccountAddressTrigger on Account (before insert, before update) {
  for(Account a: Trigger.New){
    if(a.Match_Billing_Address__c == true && a.BillingPostalCode!= null){
      a.ShippingPostalCode=a.BillingPostalCode;
    }
  }
2.Bulk Apex Trigger:(ClosedOpportunityTrigger)
trigger ClosedOpportunityTrigger on Opportunity (after insert, after update) {
 List<Task> taskList = new List<Task>();
  for (Opportunity opp: [SELECT Id, StageName FROM Opportunity WHERE StageName =
'Closed Won' AND Id IN :Trigger.new])
  taskList.add(new Task(Subject = 'Follow Up Test Task',
  WhatId = opp.Id));
 if(taskList.size()>0){
    insert taskList;
    }
  }
MODULE: APEX TESTING
1.Get Started with Apex Unit tests:(VerifyDate)
public class VerifyDate {
```

```
//method to handle potential checks against two dates
       public static Date CheckDates(Date date1, Date date2) {
              //if date2 is within the next 30 days of date1, use date2. Otherwise use the end
of the month
              if(DateWithin30Days(date1,date2)) {
```

```
return date2:
              } else {
                     return SetEndOfMonthDate(date1);
              }
       }
       //method to check if date2 is within the next 30 days of date1
       private static Boolean DateWithin30Days(Date date1, Date date2) {
              //check for date2 being in the past
       if( date2 < date1) { return false; }</pre>
       //check that date2 is within (>=) 30 days of date1
       Date date30Days = date1.addDays(30); //create a date 30 days away from date1
              if( date2 >= date30Days ) { return false; }
              else { return true; }
       }
       //method to return the end of the month of a given date
       private static Date SetEndOfMonthDate(Date date1) {
              Integer totalDays = Date.daysInMonth(date1.year(), date1.month());
              Date lastDay = Date.newInstance(date1.year(), date1.month(), totalDays);
              return lastDay;
       }
}
Test.apxc:(VerifyDate)
@isTest
private class TestVerifyDate {
  static testMethod void TestVerifyDate() {
   VerifyDate.CheckDates(System.today(),System.today().addDays(10));
   VerifyDate.CheckDates(System.today(),System.today().addDays(78));
 }
}
2.Test apex Triggers:(Create an Apex trigger RestrictContactByName on the Contact
object)
trigger RestrictContactByName on Contact (before insert, before update) {
       //check contacts prior to insert or update for invalid data
```

```
For (Contact c : Trigger.New) {
             c.AddError('The Last Name "'+c.LastName+'" is not allowed for DML');
Create separate test class TestRestrictContactByName
@istest
private class TestRestrictContactByName {
 @istest static void testname(){
   contact c = new contact(firstname='Satya',lastname='INVALIDNAME');
   test.startTest();
   database.SaveResult result = database.insert(c,false);
   test.stopTest();
   system.assertEquals('The Last Name "INVALIDNAME" is not allowed for DML',
result.getErrors()[0].getMessage());
 }
3.Create Test Data For Apex Triggers:(RandomContactFactory)
//@isTest
public class RandomContactFactory {
  public static List<Contact> generateRandomContacts(Integer numContactsToGenerate,
String FName) {
   List<Contact> contactList = new List<Contact>();
    for(Integer i=0;i<numContactsToGenerate;i++) {</pre>
      Contact c = new Contact(FirstName=FName + ' ' + i, LastName = 'Contact '+i);
      contactList.add(c);
      System.debug(c);
   }
   //insert contactList;
    System.debug(contactList.size());
   return contactList;
```

MODULE: ASYNCHRONOUS APEX

1. Use Future Methods (Account Processor.apxc)

```
public class AccountProcessor {
  @future
  public static void countContacts(List<Id> accountId_Ist) {
    Map<ld,Integer> account_cno = new Map<ld,Integer>();
    List<account> account_lst_all = new List<account>([select id, (select id from contacts) from
account]);
    for(account a:account_lst_all) {
      account_cno.put(a.id,a.contacts.size()); //populate the map
    }
    List<account> account_lst = new List<account>(); // list of account that we will upsert
    for(Id accountId : accountId_lst) {
      if(account_cno.containsKey(accountId)) {
         account acc = new account();
         acc.ld = accountId;
        acc.Number_of_Contacts__c = account_cno.get(accountId);
        account_lst.add(acc);
      }
    }
    upsert account_lst;
  }
}
Test.apxc (Account Processor)
@isTest
public class AccountProcessorTest {
  @isTest
  public static void testFunc() {
    account acc = new account();
```

```
acc.name = 'MATW INC':
    insert acc:
    contact con = new contact();
    con.lastname = 'Mann1';
    con.AccountId = acc.Id:
    insert con:
    contact con1 = new contact();
    con1.lastname = 'Mann2':
    con1.AccountId = acc.Id:
    insert con1:
    List<Id> acc_list = new List<Id>();
    acc_list.add(acc.ld);
    Test.startTest();
       AccountProcessor.countContacts(acc_list);
    Test.stopTest();
    List<account> acc1 = new List<account>([select Number_of_Contacts__c from account
where id = :acc.id]);
    system.assertEquals(2,acc1[0].Number_of_Contacts__c);
  }
}
2.Use Batch Apex: (Lead Processor.apxc)
global class LeadProcessor implements Database.Batchable<sObject>, Database.Stateful {
  global Integer leadsProcessed = 0;
  global Database.QueryLocator start(Database.BatchableContext bc){
    return Database.getQueryLocator('select id, lastname, status, company from Lead');
  global void execute(Database.BatchableContext bc, List<Lead> allLeads){
    List<Lead> leads = new List<Lead>();
    for(Lead I: allLeads){
      I.LeadSource='Dreamforce':
```

```
update leads;
  global void finish(Database.BatchableContext bc){
    System.debug(leadsProcessed + 'leads processed. Nigga!');
    AsyncApexJob job = [SELECT Id, Status, NumberOfErrors,
      JobItemsProcessed,
      TotalJobItems, CreatedBy.Email
      FROM AsyncApexJob
      WHERE Id = :bc.getJobId()];
    EmailManager.sendMail('jgatsby1996@gmail.com','Total Leads Porcessed are ','
'+leadsProcessed);
 }
Test.apxc(Lead Processor)
@isTest
public class LeadProcessorTest {
  @testSetup
  static void setup(){
    List<Lead> leads = new List<Lead>();
    for (Integer i=0;i<200;i++) {
      leads.add(new Lead(Lastname='Last '+i,
              status='Open - Not Contacted'
      , company='LeadCompany'+i));
    insert leads;
  static testmethod void test() {
    Test.startTest();
    LeadProcessor();
    Id batchId = Database.executeBatch(lp);
    Test.stopTest();
    // after the testing stops, assert records were updated properly
    System.assertEquals(200, [select count() from Lead where LeadSource = 'Dreamforce']);
```

```
}
3. Control Processes with Queuable Apex: (Add primary contact.apxc)
public class AddPrimaryContact implements Queueable {
  private Contact con;
  private String state;
  public AddPrimaryContact(Contact con,String state){
    this.con=con;
    this.state=state;
  }
  public void execute(QueueableContext context){
    List<Account> accounts = [Select Id,Name,(Select FirstName,LastName,Id from contacts)
                 from Account where BillingState = :state Limit 200];
    List<Contact> primaryContacts=new List<Contact>();
    for(Account acc:accounts){
      Contact c=con.clone();
      c.AccountId=acc.Id;
      primaryContacts.add(c);
    if(primaryContacts.size()>0){
      insert primaryContacts;
    }
  }
}
Test.apxc:( Add primary contact)
@isTest
public class AddPrimaryContactTest {
  static testmethod void testQueueable(){
    List<Account> testAccounts = new List<Account>();
    for(Integer i=0;i<50;i++){}
      testAccounts.add(new Account(Name='Account' +i,BillingState='CA'));
    }
```

```
for(Integer j=0;j<50;j++){
      testAccounts.add(new Account(Name='Account' +j,BillingState='NY'));
    }
    insert testAccounts;
    Contact testContact = new Contact(FirstName='John',LastName='Doe');
    insert testContact;
    AddPrimaryContact addit=new AddPrimaryContact(testContact, 'CA');
    Test.startTest();
    system.enqueueJob(addit);
    Test.stopTest();
    System.assertEquals(50,[Select count() from Contact where accounted in (Select Id from
Account where BillingState='CA')]);
  }
}
4.Schedule Jobs Using Apex Scheduler.: (DailyLeadProcessor.apxc)
public class DailyLeadProcessor implements schedulable{
  public void execute(schedulableContext sc) {
    List<lead> | lst_new = new List<lead>();
    List<lead> | lst = new List<lead>([select id, leadsource from lead where leadsource = null]);
    for(lead I : I_lst) {
      I.leadsource = 'Dreamforce';
      l_lst_new.add(l);
    }
    update l_lst_new;
  }
}
Test.apxc:( DailyLeadProcessor )
@isTest
```

```
public class DailyLeadProcessorTest {
  @testSetup
  static void setup(){
    List<Lead> lstOfLead = new List<Lead>();
    for(Integer i = 1; i \le 200; i++){
      Lead Id = new Lead(Company = 'Comp' + i ,LastName = 'LN'+i, Status = 'Working -
Contacted');
      lstOfLead.add(ld);
    }
    Insert IstOfLead;
  static testmethod void testDailyLeadProcessorScheduledJob(){
    String sch = '0.512**?';
    Test.startTest();
    String jobId = System.schedule('ScheduledApexTest', sch, new DailyLeadProcessor());
    List<Lead> IstOfLead = [SELECT Id FROM Lead WHERE LeadSource = null LIMIT 200];
    System.assertEquals(200, lstOfLead.size());
    Test.stopTest();
 }
}
```

APEX SPECALIST SUPERBADGE CODES

CHALLENGE-1:AUTOMATED RECORD CREATION:

(MaintenanceRequestHelper.apxc)

```
public with sharing class MaintenanceRequestHelper {
   public static void updateworkOrders(List<Case> updWorkOrders, Map<Id,Case>
nonUpdCaseMap) {
      Set<Id> validIds = new Set<Id>();

      For (Case c : updWorkOrders){
      if (nonUpdCaseMap.get(c.Id).Status != 'Closed' && c.Status == 'Closed'){
        if (c.Type == 'Repair' || c.Type == 'Routine Maintenance'){
            validIds.add(c.Id);
      }
}
```

```
}
if (!validIds.isEmpty()){
      List<Case> newCases = new List<Case>();
      Map<Id,Case> closedCasesM = new Map<Id,Case>([SELECT Id, Vehicle__c,
Equipment_c, Equipment_r.Maintenance_Cycle_c,(SELECT Id,Equipment_c,Quantity_c
FROM Equipment_Maintenance_Items__r)
                              FROM Case WHERE Id IN :validIds]);
      Map<Id,Decimal> maintenanceCycles = new Map<ID,Decimal>();
      AggregateResult[] results = [SELECT Maintenance_Request__c,
MIN(Equipment_r.Maintenance_Cycle_c)cycle FROM Equipment_Maintenance_Item_c
WHERE Maintenance_Request__c IN :ValidIds GROUP BY Maintenance_Request__c];
    for (AggregateResult ar : results){
      maintenanceCycles.put((Id) ar.get('Maintenance_Request__c'), (Decimal) ar.get('cycle'));
    }
      for(Case cc : closedCasesM.values()){
        Case nc = new Case (
          Parentld = cc.ld.
        Status = 'New'.
          Subject = 'Routine Maintenance',
          Type = 'Routine Maintenance',
          Vehicle__c = cc.Vehicle__c,
          Equipment_c = cc. Equipment_c,
          Origin = 'Web',
          Date_Reported__c = Date.Today()
If (maintenanceCycles.containskey(cc.ld)){
          nc.Date_Due__c = Date.today().addDays((Integer) maintenanceCycles.get(cc.ld));
        } else {
          nc.Date_Due__c = Date.today().addDays((Integer)
cc.Equipment__r.maintenance_Cycle__c);
        }
        newCases.add(nc);
```

```
insert newCases:
     List<Equipment_Maintenance_Item__c> clonedWPs = new
List<Equipment_Maintenance_Item__c>();
     for (Case nc : newCases){
        for (Equipment_Maintenance_Item__c wp :
closedCasesM.get(nc.ParentId).Equipment_Maintenance_Items__r){
          Equipment_Maintenance_Item__c wpClone = wp.clone();
          wpClone.Maintenance_Request__c = nc.ld;
          ClonedWPs.add(wpClone);
      insert ClonedWPs;
   }
MaintenanceRequest.apxt:
trigger MaintenanceRequest on Case (before update, after update) {
  if(Trigger.isUpdate && Trigger.isAfter){
    MaintenanceRequestHelper.updateWorkOrders(Trigger.New, Trigger.OldMap);
 }
}
      CHALLENGE-2:SYNCHROIZE SALESFORCE DATE WITH AN EXTERNAL SYSTEM:
                        (WarehouseCalloutService.apxc :-)
public with sharing class WarehouseCalloutService implements Queueable {
  private static final String WAREHOUSE_URL = 'https://th-superbadge-
apex.herokuapp.com/equipment';
```

//class that makes a REST callout to an external warehouse system to get a list of

equipment that needs to be updated.

```
//The callout's JSON response returns the equipment records that you upsert in Salesforce.
  @future(callout=true)
  public static void runWarehouseEquipmentSync(){
    Http http = new Http();
    HttpRequest request = new HttpRequest();
    request.setEndpoint(WAREHOUSE_URL);
    request.setMethod('GET');
    HttpResponse response = http.send(request);
    List<Product2> warehouseEq = new List<Product2>();
    if (response.getStatusCode() == 200){
      List<Object> jsonResponse =
(List<Object>)JSON.deserializeUntyped(response.getBody());
      System.debug(response.getBody());
      //class maps the following fields: replacement part (always true), cost, current
inventory, lifespan, maintenance cycle, and warehouse SKU
      //warehouse SKU will be external ID for identifying which equipment records to update
within Salesforce
      for (Object eq : jsonResponse){
        Map<String,Object> mapJson = (Map<String,Object>)eg;
        Product2 myEg = new Product2();
        myEq.Replacement_Part__c = (Boolean) mapJson.get('replacement');
        myEq.Name = (String) mapJson.get('name');
        myEq.Maintenance_Cycle__c = (Integer) mapJson.get('maintenanceperiod');
        myEq.Lifespan_Months__c = (Integer) mapJson.get('lifespan');
        myEg.Cost_c = (Integer) mapJson.get('cost');
        myEq.Warehouse_SKU__c = (String) mapJson.get('sku');
        myEq.Current_Inventory__c = (Double) mapJson.get('quantity');
        myEq.ProductCode = (String) mapJson.get('_id');
        warehouseEq.add(myEq);
      if (warehouseEq.size() > 0){
      upsert warehouseEq;
        System.debug('Your equipment was synced with the warehouse one');
```

```
}
  }
  public static void execute (QueueableContext context){
    runWarehouseEquipmentSync();
  }
}
CHALLENGE-3:SCHEDULABLE SYNCHORINIZATION USING APEX CODE:
               (WarehouseSyncShedule.apxc:-)
global with sharing class WarehouseSyncSchedule implements Schedulable{
  global void execute(SchedulableContext ctx){
    System.enqueueJob(new WarehouseCalloutService());
 }
}
CHALLENGE-4:TEST AUTOMATION LOGIC:
(MaintenanceRequestHelperTest.apxc :-)
@istest
public with sharing class MaintenanceRequestHelperTest {
  private static final string STATUS_NEW = 'New';
  private static final string WORKING = 'Working';
  private static final string CLOSED = 'Closed';
  private static final string REPAIR = 'Repair';
  private static final string REQUEST_ORIGIN = 'Web';
  private static final string REQUEST_TYPE = 'Routine Maintenance';
  private static final string REQUEST_SUBJECT = 'Testing subject';
  PRIVATE STATIC Vehicle_c createVehicle(){
    Vehicle_c Vehicle = new Vehicle_C(name = 'SuperTruck');
    return Vehicle;
  }
  PRIVATE STATIC Product2 createEq(){
    product2 equipment = new product2(name = 'SuperEquipment',
```

```
lifespan_months__C = 10,
                     maintenance_cycle__C = 10,
                     replacement_part__c = true);
    return equipment;
  }
  PRIVATE STATIC Case createMaintenanceRequest(id vehicleId, id equipmentId){
    case cs = new case(Type=REPAIR,
             Status=STATUS_NEW,
             Origin=REQUEST_ORIGIN,
             Subject=REQUEST_SUBJECT,
             Equipment_c=equipmentId,
             Vehicle_c=vehicleId);
    return cs;
  }
  PRIVATE STATIC Equipment_Maintenance_Item__c createWorkPart(id equipmentId,id
requestId){
    Equipment_Maintenance_Item__c wp = new
Equipment_Maintenance_Item__c(Equipment__c = equipmentId,
                                        Maintenance_Request__c = requestId);
    return wp;
  }
 @istest
  private static void testMaintenanceRequestPositive(){
    Vehicle__c vehicle = createVehicle();
    insert vehicle;
    id vehicleId = vehicle.Id;
    Product2 equipment = createEq();
    insert equipment;
    id equipmentId = equipment.Id;
    case somethingToUpdate = createMaintenanceRequest(vehicleId,equipmentId);
    insert somethingToUpdate;
    Equipment_Maintenance_Item__c workP =
createWorkPart(equipmentId,somethingToUpdate.id);
    insert workP;
    test.startTest();
```

```
somethingToUpdate.status = CLOSED;
    update somethingToUpdate;
    test.stopTest();
    Case newReq = [Select id, subject, type, Equipment_c, Date_Reported_c, Vehicle_c,
Date_Due__c
           from case
           where status =:STATUS_NEW];
    Equipment_Maintenance_Item__c workPart = [select id
                         from Equipment_Maintenance_Item__c
                         where Maintenance_Request__c =:newReq.ld];
    system.assert(workPart != null);
    system.assert(newReg.Subject != null);
    system.assertEquals(newReq.Type, REQUEST_TYPE);
    SYSTEM.assertEquals(newReq.Equipment_c, equipmentId);
    SYSTEM.assertEquals(newReq.Vehicle_c, vehicleId);
    SYSTEM.assertEquals(newReq.Date_Reported__c, system.today());
 }
@istest
  private static void testMaintenanceRequestNegative(){
    Vehicle__C vehicle = createVehicle();
    insert vehicle;
    id vehicleId = vehicle.Id;
    product2 equipment = createEq();
    insert equipment;
    id equipmentId = equipment.Id;
    case emptyReg = createMaintenanceReguest(vehicleId,eguipmentId);
    insert emptyReg;
    Equipment_Maintenance_Item_c workP = createWorkPart(equipmentId, emptyReq.Id);
    insert workP;
    test.startTest();
    emptyReq.Status = WORKING;
    update emptyReg;
    test.stopTest();
```

```
list<case> allRequest = [select id
                  from casel;
    Equipment_Maintenance_Item__c workPart = [select id
                            from Equipment_Maintenance_Item__c
                            where Maintenance_Request__c = :emptyReq.Id];
    system.assert(workPart != null);
    system.assert(allRequest.size() == 1);
  }
@istest
  private static void testMaintenanceRequestBulk(){
    list<Vehicle_C> vehicleList = new list<Vehicle_C>();
    list<Product2> equipmentList = new list<Product2>();
    list<Equipment_Maintenance_Item__c> workPartList = new
list<Equipment_Maintenance_Item__c>();
    list<case> requestList = new list<case>();
    list<id> oldRequestIds = new list<id>();
    for(integer i = 0; i < 300; i++){
      vehicleList.add(createVehicle());
      equipmentList.add(createEq());
    }
    insert vehicleList;
    insert equipmentList;
    for(integer i = 0; i < 300; i++){
      requestList.add(createMaintenanceRequest(vehicleList.get(i).id, equipmentList.get(i).id));
    }
    insert requestList;
    for(integer i = 0; i < 300; i++){
      workPartList.add(createWorkPart(equipmentList.get(i).id, requestList.get(i).id));
    }
    insert workPartList;
    test.startTest();
    for(case req : requestList){
      reg.Status = CLOSED;
      oldRequestIds.add(req.ld);
    }
```

```
update requestList;
    test.stopTest();
    list<case> allRequests = [select id
                 from case
                 where status =: STATUS_NEW];
    list<Equipment_Maintenance_Item__c> workParts = [select id
                             from Equipment_Maintenance_Item__c
                             where Maintenance_Request_c in: oldRequestIds];
    system.assert(allRequests.size() == 300);
  }
MaintenanceRequestHelper.apxc:-
trigger MaintenanceRequest on Case (before update, after update) {
  if(Trigger.isUpdate && Trigger.isAfter){
    MaintenanceRequestHelper.updateWorkOrders(Trigger.New, Trigger.OldMap);
 }
}
CHALLENGE-5:TEST CALLOUT LOGIC:
        (WarehouseCalloutService.apxc:-)
        public with sharing class WarehouseCalloutService {
          private static final String WAREHOUSE_URL = 'https://th-
        superbadge-apex.herokuapp.com/equipment';
          //@future(callout=true)
          public static void runWarehouseEquipmentSync(){
            Http http = new Http();
            HttpRequest request = new HttpRequest();
```

```
request.setEndpoint(WAREHOUSE_URL);
    request.setMethod('GET');
    HttpResponse response = http.send(request);
    List<Product2> warehouseEq = new List<Product2>();
    if (response.getStatusCode() == 200){
      List<Object> jsonResponse =
(List<Object>)JSON.deserializeUntyped(response.getBody());
      System.debug(response.getBody());
      for (Object eq : jsonResponse){
        Map<String,Object> mapJson = (Map<String,Object>)eq;
        Product2 myEq = new Product2();
        myEq.Replacement_Part__c = (Boolean)
mapJson.get('replacement');
        myEq.Name = (String) mapJson.get('name');
        myEq.Maintenance_Cycle__c = (Integer)
mapJson.get('maintenanceperiod');
        myEq.Lifespan_Months__c = (Integer)
mapJson.get('lifespan');
        myEq.Cost_c = (Decimal) mapJson.get('lifespan');
        myEq.Warehouse_SKU__c = (String) mapJson.get('sku');
```

```
myEq.Current_Inventory__c = (Double)
mapJson.get('quantity');
        warehouseEq.add(myEq);
      }
      if (warehouseEq.size() > 0){
        upsert warehouseEq;
        System.debug('Your equipment was synced with the
warehouse one');
        System.debug(warehouseEq);
}
   }
}
WarehouseCalloutServiceTest.apxc:-
@isTest
private class WarehouseCalloutServiceTest {
  @isTest
  static void testWareHouseCallout(){
    Test.startTest();
    // implement mock callout test here
    Test.setMock(HTTPCalloutMock.class, new
WarehouseCalloutServiceMock());
    WarehouseCalloutService.runWarehouseEquipmentSync();
```

```
Test.stopTest();
    System.assertEquals(1, [SELECT count() FROM Product2]);
  }
}
WarehouseCalloutServiceMock.apxc:-
@isTest
global class WarehouseCalloutServiceMock implements
HttpCalloutMock {
  // implement http mock callout
  global static HttpResponse respond(HttpRequest request){
    System.assertEquals('https://th-superbadge-
apex.herokuapp.com/equipment', request.getEndpoint());
    System.assertEquals('GET', request.getMethod());
    // Create a fake response
    HttpResponse response = new HttpResponse();
    response.setHeader('Content-Type', 'application/json');
response.setBody('[{"_id":"55d66226726b611100aaf741","replace
ment":false,"quantity":5,"name":"Generator 1000
kW","maintenanceperiod":365,"lifespan":120,"cost":5000,"sku":"100
003"}]');
    response.setStatusCode(200);
```

```
return response;
 }
}
CHALLENGE-6:TEST SCHEDULING LOGIC:
(WarehouseSyncSchedule.apxc:-)
global class WarehouseSyncSchedule implements
Schedulable {
  global void execute(SchedulableContext ctx) {
WarehouseCalloutService.runWarehouseEquipmentSync();
  }
}
WarehouseSyncScheduleTest.apxc:-
@isTest
public class WarehouseSyncScheduleTest {
  @isTest static void WarehousescheduleTest(){
    String scheduleTime = '00 00 01 * * ?';
    Test.startTest();
    Test.setMock(HttpCalloutMock.class, new
WarehouseCalloutServiceMock());
    String jobID=System.schedule('Warehouse Time To
```

```
Schedule to Test', scheduleTime, new
WarehouseSyncSchedule());

Test.stopTest();

//Contains schedule information for a scheduled job.
CronTrigger is similar to a cron job on UNIX systems.

// This object is available in API version 17.0 and later.

CronTrigger a=[SELECT Id FROM CronTrigger where
NextFireTime > today];

System.assertEquals(jobID, a.Id,'Schedule ');

}
```