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## **Backend Codes**

## Connects frontend with backend (Using Django):

```
DATABASES = {
   'default': {
        'ENGINE': 'django.db.backends.postgresql',
        'NAME': 'olympics',
        'USER': 'postgres',
        'PASSWORD': 'admin',
        'HOST': 'localhost',
        'PORT': '5432',
    }
}
```

#### Code for setting up the URL:

```
urlpatterns = [
  path('admin/', admin.site.urls),
  path('sortLeaderboard', views.sortLeaderboard, name="sortLeaderboard"),
  path('showLeaderboard', views.showLeaderboard, name="showLeaderboard"),
  path('insertLeaderboard', views.insertLeaderboard, name="insertLeaderboard"),
  path('editLeaderboard/<int:id>',views.editLeaderboard,name="editLeaderboard"),
  path(",views.HomePage,name="HomePage"),
  path('updateLeaderboard/<int:id>',views.updateLeaderboard,name="updateLeaderboard"),
  path('delLeaderboard/<int:id>',views.delLeaderboard,name="delLeaderboard"),
  path('deletedLeaderboard/<int:id>',views.deletedLeaderboard,name="deletedLeaderboard")
  path('runQueryLeaderboard', views.runQueryLeaderboard, name="runQueryLeaderboard"),
  path('showAthlete', views.showAthlete, name="showAthlete"),
  path('insertAthlete', views.insertAthlete, name="insertAthlete"),
  path('sortAthlete', views.sortAthlete, name="sortAthlete"),
  path('editAthlete/<int:id>',views.editAthlete,name="editAthlete"),
  path('updateAthlete/<int:id>',views.updateAthlete,name="updateAthlete"),
  path('delAthlete/<int:id>',views.delAthlete,name="delAthlete"),
  path('deletedAthlete/<int:id>',views.deletedAthlete,name="deletedAthlete"),
  path('runQueryAthlete', views.runQueryAthlete, name="runQueryAthlete"),
```

## Code for setting up the modules used for frontend:

```
class Leaderboard(models.Model):
  country_id = models.IntegerField(primary_key=True)
  country_name = models.CharField(max_length=100)
  gold_medals = models.IntegerField()
  silver_medals = models.IntegerField()
  bronze_medals = models.IntegerField()
  total_medals = models.IntegerField()
  class Meta:
    db_table = 'leaderboard'
```

```
class Athlete(models.Model):
  athlete_id = models.IntegerField(primary_key=True)
  athlete_name = models.CharField(max_length=100)
  gender = models.CharField(max_length=100)
  height = models.FloatField()
  weight = models.IntegerField()
  age = models.IntegerField()
  sport = models.CharField(max_length=100)
  country = models.CharField(max_length=100)
  class Meta:
    db table = 'athlete'
Code for fetching, editing, deleting and sorting in the database:
def HomePage(request):
  return render(request, 'HomePage.html')
def showLeaderboard(request):
  showall=Leaderboard.objects.all()
  context = {
    'data': showall
  }
  return render(request, 'showLeaderboard.html',context)
def sortLeaderboard(request):
  if request.method=="POST":
    if request.POST.get('Sort'):
      type=request.POST.get('Sort')
      sorted=Leaderboard.objects.all().order_by(type)
      context = {
        'data': sorted
      }
```

return render(request, 'sortLeaderboard.html',context)

```
else:
    return render(request, 'sortLeaderboard.html')
def insertLeaderboard(request):
  if request.method=="POST":
    if request.POST.get('country_id') and request.POST.get('country_name') and
request.POST.get('gold_medals') and request.POST.get('silver_medals') and
request.POST.get('bronze_medals') and request.POST.get('total_medals'):
      saverecord=Leaderboard()
      saverecord.country_id=request.POST.get('country_id')
      saverecord.country_name=request.POST.get('country_name')
      saverecord.gold_medals=request.POST.get('gold_medals')
      saverecord.silver_medals=request.POST.get('silver_medals')
      saverecord.bronze_medals=request.POST.get('bronze_medals')
      saverecord.total_medals=request.POST.get('total_medals')
      allval=Leaderboard.objects.all()
      for i in allval:
        if int(i.country_id)==int(request.POST.get('country_id')):
           messages.warning(request, 'Country already exists....!');
          return render(request, insertLeaderboard.html')
      saverecord.save()
      messages.success(request,'Leaderboard '+saverecord.country_name+' is saved
successfully!')
      return render(request, insertLeaderboard.html')
  else:
      return render(request, insertLeaderboard.html')
def editLeaderboard(request,id):
  editLeaderboardObj=Leaderboard.objects.get(country_id=id)
  context={
    "Leaderboard":editLeaderboardObj
  }
```

```
return render(request, 'editLeaderboard.html',context)
```

```
def updateLeaderboard(request,id):
  updateLeaderboard=Leaderboard.objects.get(country_id=id)
  form=LeaderboardForms(request.POST,instance=updateLeaderboard)
  if form.is valid():
    form.save()
    messages.success(request, 'Record updated successfully!')
    return render(request, 'editLeaderboard.html', {"Leaderboard":updateLeaderboard})
def delLeaderboard(request,id):
  delLeaderboardObj=Leaderboard.objects.get(country_id=id)
  context={
    "Leaderboard":delLeaderboardObj
  }
  return render(request, 'delLeaderboard.html',context)
def deletedLeaderboard(request,id):
  delLeaderboardObj=Leaderboard.objects.get(country_id=id)
  delLeaderboardObj.delete()
  showall=Leaderboard.objects.all()
  messages.success(request, 'Record deleted successfully!')
  return render(request, 'delLeaderboard.html', ("Leaderboard": delLeaderboardObjl)
def showAthlete(request):
  showall=Athlete.objects.all()
  context = {
    'data': showall
  }
  return render(request, 'showAthlete.html',context)
def insertAthlete(request):
  if request.method=="POST":
```

```
if request.POST.get('athlete_id') and request.POST.get('athlete_name') and
request.POST.get('gender') and request.POST.get('height') and request.POST.get('weight') and
request.POST.get('age') and request.POST.get('sport') and request.POST.get('country'):
      saverecord=Athlete()
      saverecord.athlete_id=request.POST.get('athlete_id')
      saverecord.athlete_name=request.POST.get('athlete_name')
      saverecord.gender=request.POST.get('gender')
      saverecord.height=request.POST.get('height')
      saverecord.weight=request.POST.get('weight')
      saverecord.age=request.POST.get('age')
      saverecord.sport=request.POST.get('sport')
      saverecord.country=request.POST.get('country')
      allval=Athlete.objects.all()
      for i in allval:
         if int(i.athlete_id)==int(request.POST.get('athlete_id')):
           messages.warning(request, 'Athlete already exists....!');
           return render(request, 'insertAthlete.html')
      saverecord.save()
      messages.success(request, 'Athlete '+saverecord.athlete_name+' is saved successfully!')
      return render(request, 'insertAthlete.html')
  else:
      return render(request, 'insertAthlete.html')
def sortAthlete(request):
  if request.method=="POST":
    if request.POST.get('Sort'):
      type=request.POST.get('Sort')
      sorted=Athlete.objects.all().order_by(type)
      context = {
         'data': sorted
      }
```

```
return render(request, 'sortAthlete.html',context)
  else:
    return render(request, 'sortAthlete.html')
def editAthlete(request,id):
  editAthleteObj=Athlete.objects.get(athlete_id=id)
  context={
    "Athlete":editAthleteObj
  }
  return render(request, 'editAthlete.html',context)
def updateAthlete(request,id):
  updateAthlete=Athlete.objects.get(athlete_id=id)
  form=AthleteForms(request.POST,instance=updateAthlete)
  if form.is valid():
    form.save()
    messages.success(request, 'Record updated successfully!')
    return render(request, 'editAthlete.html', {"Athlete":updateAthlete})
def delAthlete(request,id):
  delCusObj=Athlete.objects.get(athlete_id=id)
  context={
    "Athlete":delCusObj
  }
  return render(request, 'delAthlete.html',context)
def deletedAthlete(request,id):
  delCusObj=Athlete.objects.get(athlete_id=id)
  delCusObj.delete()
  showall=Athlete.objects.all()
  messages.success(request, 'Record deleted successfully!')
  return render(request, 'delAthlete.html', {"Athlete": delCusObj})
```

```
def runQueryLeaderboard(request):
    raw_query = "select * from leaderboard order by total_medals desc limit 3;"
    cursor = connection.cursor()
    cursor.execute(raw_query)
    alldata=cursor.fetchall()

return render(request,'runQueryLeaderboard.html',f'data':alldata])

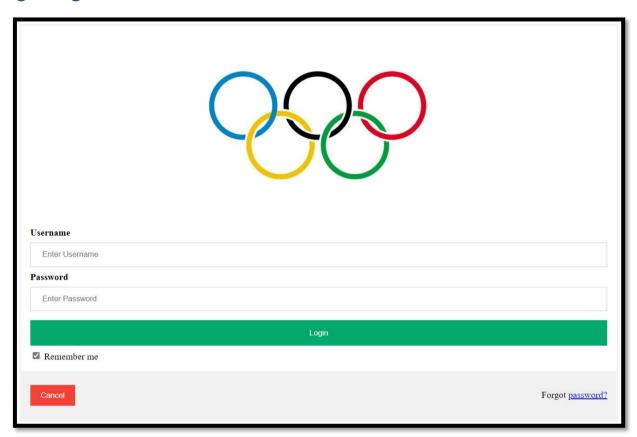
def runQueryAthlete(request):
    raw_query = "select * from athlete where age between 30 and 35;"

    cursor = connection.cursor()
    cursor.execute(raw_query)
    alldata=cursor.fetchall()

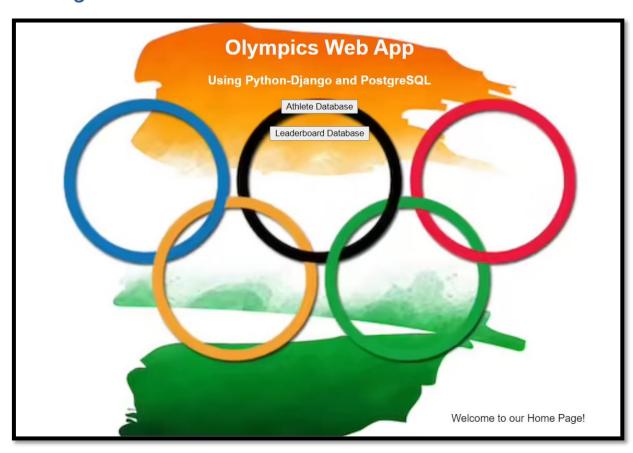
return render(request,'runQueryAthlete.html',f'data':alldata])
```

# Screenshots of the Website that connects the Database:

# 1) Login Page:



# 2) Home Page:



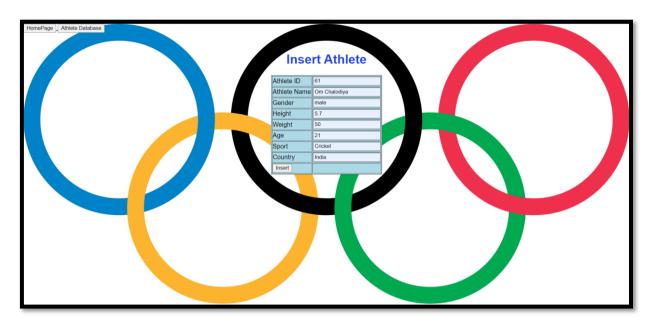
#### 3) Athlete Database:

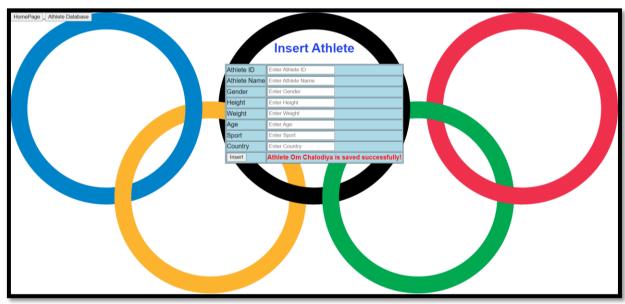


#### 4) Sort Athlete Records:



### 5) Insert Athlete Record:







#### 6) Edit Athlete Record:

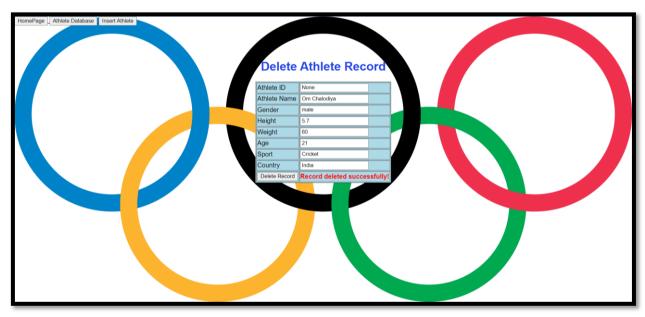






#### 7) Delete Athlete Record:







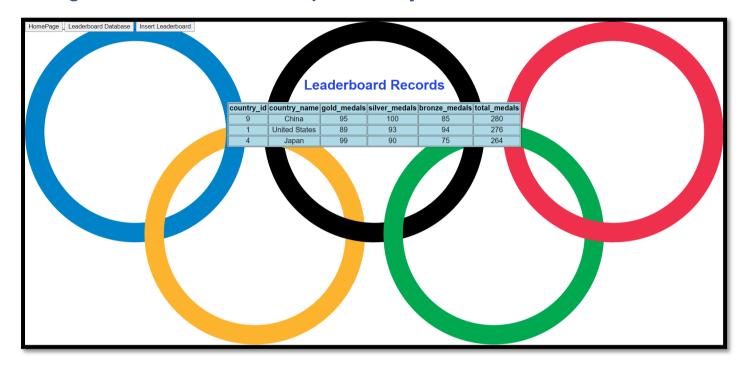
#### 8) Leaderboard Database:



# 9) Query-1: Display the details of the athletes who are in the age group of 30-35:



10) Query-2: Display the top three countries of the leaderboard who has won the highest no. of medals till the present day:



**THANK YOU**