

# FullCalendar/ Event Calendar Ajax in Python/ Django

## 1. Create a Project

django-admin startproject Event\_Cal\_Web

## 2. Create a App

python manage.py startapp ev\_calendar

## 3. Update setting.py

```
INSTALLED_APPS = [  
    'ev_calendar.apps.EvCalendarConfig',  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
]
```

## 4. Create model at 'ev\_calendar/models.py'

```
from django.db import models  
  
# Create your models here.  
class Event(models.Model):  
    title = models.CharField(max_length=255)  
    start = models.DateField()  
    end = models.DateField()  
  
    def __str__(self):  
        return self.title
```

Now migrate it,

python manage.py makemigrations

python manage.py migrate

## 5. Creating the views at 'ev\_calendar/views.py'

```
from django.shortcuts import render
from . models import Event
from django.http import HttpResponse,
JsonResponse
from django.core import serializers
import json
from django.urls import reverse

# Create your views here.
def calendar(request):
    all_events = Event.objects.all()
    context = {
        "events": all_events,
    }
    return render(request, 'base.html', context)

#Display all_events.
def all_events(request):
    all_events = Event.objects.all()
    out = []
    for event in all_events:
        out.append({
            'title': event.title,
            'id': event.id,
            'start':
event.start.strftime("%m/%d/%Y, %H:%M:%S"),
            'end':
event.end.strftime("%m/%d/%Y, %H:%M:%S"),
        })
    return JsonResponse(out, safe=False)

#Create event
def add_event(request):
```

```
start = request.GET.get("start", None)
end = request.GET.get("end", None)
title = request.GET.get("title", None)
event = Event(title=str(title),
start=start, end=end)
event.save()
data = {}
return JsonResponse(data)

#Update Event
def update(request):
    start = request.GET.get("start", None)
    end = request.GET.get("end", None)
    title = request.GET.get("title", None)
    id = request.GET.get("id", None)
    event = Event.objects.get(id=id)
    event.start = start
    event.end = end
    event.title = title
    event.save()
    data = {}
    return JsonResponse(data)

#Remove event
def remove(request):
    id = request.GET.get("id", None)
    event = Event.objects.get(id=id)
    event.delete()
    data = {}
    return JsonResponse(data)
```

## 6. Creating the templates, within the template create html file, and at 'ev\_calendar/templaes/base.html,

```
{% load static %}
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Event Calendar Web</title>
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/fullcalend
ar/3.4.0/fullcalendar.css"/>
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/twitter-
bootstrap/4.0.0-alpha.6/css/bootstrap.css"/>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.2.
1/jquery.min.js"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/jqueryui/1.
12.1/jquery-ui.min.js"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/moment.js/2
.18.1/moment.min.js"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/fullcalenda
r/3.4.0/fullcalendar.min.js"></script>

    <script
src="https://cdnjs.cloudflare.com/ajax/libs/toastr.js/1
atest/toastr.min.js"></script>
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/toastr.js/
latest/toastr.min.css" />

    <script src="{% static 'calendar.js' %}"></script>

    <style type="text/css">
        .fc-title{
            color: white !important;
```

```

        </style>

</head>
<body>

<br/>
<h2 align="center"><a href="#">Django fullCalendar/
Event Calendar Ajax </a></h2>
<br/>
<div class="container">
    <div id="calendar"></div>
</div>

</body>
</html>

```

## 7. Create static directory, within the static directory create JS file, at 'ev\_calendar/static/calendar.js'

```

$(document).ready(function() {
    var calendar = $('#calendar').fullCalendar({
        header:{
            left: 'prev,next today',
            center: 'title',
            right: 'month,agendaWeek,agendaDay'
        },
        displayEventTime: false,
        events: '/all_events',
        selectable: true,
        selectHelper: true,
        editable: true,
        eventLimit: true,
        select: function (start, end, allDay) {
            var title = prompt("Enter Event Title");
            if (title){
                var start = $.fullCalendar.formatDate(start, "Y-MM-DD");
                var end = $.fullCalendar.formatDate(end, "Y-MM-DD");
                $.ajax({
                    type:"GET",
                    url:'/add_event',
                    data:{'title': title, 'start': start, 'end': end},
                    dataType: "json",
                    success: function (data) {
                        calendar.fullCalendar('refetchEvents');
                        displayMessage("Event Created Successfully");
                    },
                    error: function (data){

```

```

        alert('There is a problem!!!');
    }
    });
}
},
eventResize: function (event) {
    var start = $.fullCalendar.formatDate(event.start, "Y-MM-DD");
    var end = $.fullCalendar.formatDate(event.Date, "Y-MM-DD");
    var title = event.title;
    var id = event.id;
    $.ajax({
        type: "GET",
        url: '/update',
        data: {'title':title, 'start':start, 'end':end, 'id':id},
        dataType: "json",
        success: function (data){
            calendar.fullCalendar('refetchEvents');
            displayMessage("Event Updated Successfully");
        },
        error: function (data) {
            alert('There is a problem!!!');
        }
    });
},
eventDrop: function (event) {
    var start = $.fullCalendar.formatDate(event.start, "Y-MM-DD");
    var end = $.fullCalendar.formatDate(event.end, "Y-MM-DD");
    var title = event.title;
    var id = event.id;
    $.ajax({
        type: "GET",
        url: '/update',
        data: {'title':title, 'start':start, 'end':end, 'id':id},
        dataType: "json",
        success: function (data) {
            calendar.fullCalendar('refetchEvents');
            displayMessage("Event Updated Successfully");
        },
        error: function (data) {
            alert('There is a problem!!!');
        }
    });
},
eventClick: function (event){
    if (confirm("Are you sure you want to remove it?")){
        var id = event.id;
        $.ajax({
            type: "GET",
            url: '/remove',
            data: {'id':id},
            dataType: "json",
            success: function (data) {
                calendar.fullCalendar('refetchEvents');
                displayMessage("Event Delete Successfully");
            },
            error: function (data) {
                alert('There is a problem!!!');
            }
        });
    }
}

```

```

    });
    },
  });
});

function displayMessage(message) {
  toastr.success(message, 'Event');
}

```

## 8. Create urls

At 'ev\_calendar/urls.py'

```

from django.urls import path
from . import views

urlpatterns = [
    path('', views.calendar, name='calendar'), # Default URL pattern for the
    root URL
    path('calendar/', views.calendar, name='calendar'),
    path('add_event/', views.add_event, name='add_event'),
    path('update/', views.update, name='update'),
    path('remove/', views.remove, name='remove'),
    path('all_events/', views.all_events, name='all_events'),
]

```

At 'Event\_Cal\_Web/urls.py'

```

from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('ev_calendar.urls')),
]

```