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| --- | --- | --- |
| 1 | pip install django |  |
| 2 | django-admin startproject config . |  |
| 3 | psql -U postgres  create database boatsell |  |
| 4 | python manage.py startapp boat |  |
| 5 | config--setting -- INSTALLED\_APPS -- boat |  |
| 6 | DATABASES = {  'default': {  'ENGINE': 'django.db.backends.postgresql',  'NAME': 'boatsell',  'USER': 'postgres',  'PASSWORD': 128943  }  } |  |
| 7 | add -- directory --static  STATICFILES\_DIRS = (  BASE\_DIR / 'static',  ) |  |
| 8 | boat -- создать -- urls.py  from django.urls import path  from boat.apps import BoatConfig  app\_name = BoatConfig.name  urlpatterns = [  ] |  |
|  | Config-- urls.py  from django.urls import path,include  urlpatterns = [  path('admin/', admin.site.urls),  path('',include('boat.urls',namespace='boat')) ] |  |
|  | Boat – models.py |  |
|  | pip install psycopg2-binary  python manage.py makemigrations  python manage.py migrate |  |
|  | python manage.py createsuperuser |  |
|  | config--setting  LANGUAGE\_CODE = 'ru-ru' |  |
|  | Boat – admin.py |  |
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from django.db import models  
  
NULLABLE = {'blank': True, 'null': True}  
  
  
class Owner(models.Model):  
 name = models.CharField(max\_length=150, verbose\_name='имя')  
 email = models.EmailField(verbose\_name='почта', unique=True)  
  
 def \_\_str\_\_(self):  
 return f' {self.email} ({self.name})'  
  
 class Meta:  
 verbose\_name = 'владелец'  
 verbose\_name\_plural = 'владельцы'  
  
  
class Boat(models.Model):  
 name = models.CharField(max\_length=50, verbose\_name='название')  
 year = models.PositiveSmallIntegerField(\*\*NULLABLE, verbose\_name='год выпуска')  
  
 owner = models.ForeignKey(Owner, on\_delete=models.CASCADE, verbose\_name='владелец')  
  
 def \_\_str\_\_(self):  
 return f'{self.name}'  
  
 class Meta:  
 verbose\_name = 'лодка'  
 verbose\_name\_plural = 'лодки'  
  
  
class BoatHistory(models.Model):  
 boat = models.ForeignKey(Boat, on\_delete=models.CASCADE, verbose\_name='лодка')  
 owner = models.ForeignKey(Owner, on\_delete=models.SET\_NULL, verbose\_name='владелец', \*\*NULLABLE)  
 start\_year = models.PositiveSmallIntegerField(\*\*NULLABLE, verbose\_name='владел с')  
 stop\_year = models.PositiveSmallIntegerField(\*\*NULLABLE, verbose\_name='владел по')  
  
 def \_\_str\_\_(self):  
 return f'{self.boat} {self.start\_year}--{self.stop\_year}'  
  
 class Meta:  
 verbose\_name = 'история'  
 verbose\_name\_plural = 'история'