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(МГТУ им. Н.Э. Баумана)**

Факультет «Радиотехнический»

Кафедра ИУ5 «Системы обработки информации и управления»

Рубежный контроль №2

по дисциплине «Разработка интернет-приложений»

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Задание:

1. Создайте проект Python Django с использованием стандартных средств Django.
2. Создайте модель Django ORM, содержащую две сущности, связанные отношением один-ко-многим в соответствии с Вашим вариантом из условий рубежного контроля №1.
3. С использованием стандартного механизма Django сгенерируйте по модели макет веб-приложения, позволяющий добавлять, редактировать и удалять данные.
4. Создайте представление и шаблон, формирующий отчет, который содержит соединение данных из двух таблиц.

Текст программы:

Текст программы доступен по ссылке в github-репозитории:

<https://github.com/lonkidely/lu5web/tree/master/rk2>

Экранные формы с примерами выполнения программы:

Добавление новой записи в таблице Langs, метод POST:

The screenshot shows a REST client interface with a POST request to the endpoint `127.0.0.1:8000/lang`. The request body is a JSON object with the following fields:

```
1 {
2   "id": 5,
3   "title": "GO",
4   "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
5 }
```

Список всех языков, метод GET:

BodyCookiesHeaders (10)Test Results

Status: 200 OK

PrettyRawPreviewVisualizeJSON

```
1 {
2   {
3     "id": 1,
4     "title": "C",
5     "descr": "C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system."
6   },
7   {
8     "id": 2,
9     "title": "C++",
10    "descr": "C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or \"C with Classes\"."
11  },
12  {
13    "id": 3,
14    "title": "C#",
15    "descr": "C# is a general-purpose, multi-paradigm programming language."
16  },
17  {
18    "id": 4,
19    "title": "Java",
20    "descr": "Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible."
21  },
22  {
23    "id": 5,
24    "title": "Go",
25    "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
26  }
27 }
```

Удаление языка, метод DELETE:

DEL 127.0.0.1:8000/lan... + ...

127.0.0.1:8000/lang/5

DELETE127.0.0.1:8000/lang/5

ParamsAuthorizationHeaders (8)BodyPre-request ScriptTestsSettings

noneform-datax-www-form-urlencodedrawbinaryGraphQLJSON

```
1 {
2   "title": "Go",
3   "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
4 }
```

Редактирование языка, метод PUT:

PUT 127.0.0.1:8000/lan... + ...

127.0.0.1:8000/lang/4/

PUT127.0.0.1:8000/lang/4/


ParamsAuthorizationHeaders (8)BodyPre-request ScriptTestsSettings

noneform-datax-www-form-urlencodedrawbinaryGraphQLJSON

```
1 {
2   "title": "Go",
3   "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
4 }
```


Было:


Body Cookies Headers (10) Test Results  Status: 200 OK

Pretty Raw Preview Visualize JSON 

```
1  {
2
3      "id": 1,
4      "title": "C",
5      "descr": "C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system."
6  },
7  {
8      "id": 2,
9      "title": "C++",
10     "descr": "C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or \"C with Classes\"."
11  },
12  {
13     "id": 3,
14     "title": "C#",
15     "descr": "C# is a general-purpose, multi-paradigm programming language."
16  },
17  {
18     "id": 4,
19     "title": "Java",
20     "descr": "Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible."
21  },
22  {
23     "id": 5,
24     "title": "Go",
25     "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
26  }
27 }
```

Стало:

Body Cookies Headers (10) Test Results  Status: 200 OK

Pretty Raw Preview Visualize JSON 

```
1  {
2
3      "id": 1,
4      "title": "C",
5      "descr": "C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system."
6  },
7  {
8      "id": 2,
9      "title": "C++",
10     "descr": "C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or \"C with Classes\"."
11  },
12  {
13     "id": 3,
14     "title": "C#",
15     "descr": "C# is a general-purpose, multi-paradigm programming language."
16  },
17  {
18     "id": 4,
19     "title": "Go",
20     "descr": "Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.S"
21  }
22 }
```

Получение списка операторов, метод GET:

```
Body Cookies Headers (10) Test Results
Pretty Raw Preview Visualize JSON ↕
1 [
2   {
3     "id": 1,
4     "title": ">>",
5     "lang": 2
6   },
7   {
8     "id": 2,
9     "title": "*",
10    "lang": 1
11  },
12  {
13    "id": 3,
14    "title": "%",
15    "lang": 3
16  }
17 ]
```

Добавление оператора, метод POST:

```
POST 127.0.0.1:8000/op... + ...
127.0.0.1:8000/oper

POST 127.0.0.1:8000/oper
Params Authorization Headers (8) Body ● Pre-request Script Tests Settings
● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL JSON ▼
1 [
2   ... "id": 4,
3   ... "title": "&&",
4   ... "lang": 2
5 ]
```

Редактирование данных оператора, метод PUT:

PUT 127.0.0.1:8000/op... ●

+

...

127.0.0.1:8000/oper/4/

PUT ▼

127.0.0.1:8000/oper/4/

Params Authorization Headers (8) Body ● Pre-request Script Tests Settings

● none

● form-data

● x-www-form-urlencoded

● raw

● binary

● GraphQL

JSON ▼

1

}

2

.... "title": "anything",

3

.... "lang": 1

4

}

Удаление оператора, метод DELETE:

DEL 127.0.0.1:8000/ope... ●

+

...

127.0.0.1:8000/oper/4/

DELETE ▼

127.0.0.1:8000/oper/4/

Params Authorization Headers (8) Body ● Pre-request Script Tests Settings

● none

● form-data

● x-www-form-urlencoded

● raw

● binary

● GraphQL

JSON ▼

1

}

2

.... "title": "anything",

3

.... "lang": 1

4

}

Соединение данных из двух таблиц:

127.0.0.1:8000/report/

ID	Оператор	Язык	Описание языка
2	*	C	C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system.
9	&	C	C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system.
1	>>	C++	C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes".
5		C++	C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes".
8	<<	C++	C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes".
3	%	C#	C# is a general-purpose, multi-paradigm programming language.
6	-	Go	Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.
7	+	Go	Go is a statically typed, compiled programming language designed at Google by Robert Griesemer, Rob Pike, and Ken Thompson.
10	**	Python	Python is an interpreted high-level general-purpose programming language.