

Coverage for

django/learning_base/multiple_choice/models.py : 92%

38 statements

35 run

3 missing

0 excluded



```
1  """
2  module containing all models for multiple choice questions
3  """
4
5  from django.db import models
6  from learning_base.models import Question
7
8
9  class MultipleChoiceQuestion(Question):
10     """
11     A simple multiple choice question
12     :Leonhard Wiedmann:
13     """
14     __name__ = "multiple_choice"
15
16     question_image = models.TextField(
17         verbose_name="The Image for the question",
18         blank=True,
19     )
20
21     feedback_image = models.TextField(
22         verbose_name="The Image for the question",
23         blank=True,
24     )
25
26     def num_correct_answers(self):
27         """
28         :author: Claas Voelcker
29         :return: the number of correct answers
30         """
31         return len(MultipleChoiceAnswer.objects.filter(
32             question=self, is_correct=True))
33
34     def not_solvable(self):
35         """
36         Checks whether the question is actually solvable
37         :author: Claas Voelcker
38         :return: True if the number of answers is 0
39         """
40         return self.num_correct_answers() == 0
41
42     def evaluate(self, data):
43         """
44         data: Map of answers
45         :return: True if and only if the array of provided answers are exactly
46         the correct answers
47         :author: Tobias Huber
48         """
49
50         # get all correct answers, map them to their id and make a
51         # (mathematical) set out of it"
52         answers = set([x.id for x in
53             self.multiplechoicanswer_set.filter(is_correct=True)])
54         return answers == set(data)
55
56     def __str__(self):
57         return self.title
```

```

58
59 | def answer_set(self):
60 |     """
61 |         shorthand for the answer set
62 |         :author: Leonhard Wiedmann
63 |         :return: the QuerySet of all answers
64 |         """
65 |     return self.multiplechoicanswer_set.all()
66
67 | @staticmethod
68 | def get_serializer():
69 |     """
70 |         reverse for the serializer
71 |         :author: Claas Voelcker
72 |         :return: the fitting serializer
73 |         """
74 |     from . import serializer
75 |     return serializer.MultipleChoiceQuestionSerializer
76
77 | def get_points(self):
78 |     """
79 |         returns the points value of the question
80 |         :return: 2 if the course is hard, else 1
81 |         """
82 |     return 2 if self.module.course.category == 2 else 1
83
84 | @staticmethod
85 | def get_edit_serializer():
86 |     """
87 |         reverse for the serializer
88 |         :author: Claas Voelcker
89 |         :return: the fitting serializer
90 |         """
91 |     from . import serializer
92 |     return serializer.MultipleChoiceQuestionEditSerializer
93
94
95 | class MultipleChoiceAnswer(models.Model):
96 |     """
97 |         A possible answer to a multiple choice question
98 |         :author: Claas Voelcker
99 |         """
100 |     question = models.ForeignKey(
101 |         MultipleChoiceQuestion,
102 |         on_delete=models.CASCADE
103 |     )
104
105 |     text = models.TextField(
106 |         verbose_name="Answer text",
107 |         help_text="The answers text"
108 |     )
109
110 |     is_correct = models.BooleanField(
111 |         verbose_name='is the answer correct?',
112 |         default=False
113 |     )
114
115 |     img = models.TextField(
116 |         verbose_name="The Image for the answer",
117 |         blank=True
118 |     )
119
120 | def __str__(self):
121 |     return self.text
122

```

```
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124 | def get_serializer():
125 |     """
126 |         reverse for the serializer
127 |         :author: Claas Voelcker
128 |         :return: the fitting serializer
129 |         """
130 |     from learning_base.multiple_choice import serializer
131 |     return serializer.MultipleChoiceAnswerSerializer
132 |
133 | @staticmethod
134 | def get_edit_serializer():
135 |     """
136 |         reverse for the serializer
137 |         :author: Claas Voelcker
138 |         :return: the fitting serializer
139 |         """
140 |     from learning_base.multiple_choice import serializer
141 |     return serializer.MultipleChoiceAnswerEditSerializer
```