If there is a new point [1,−1.5], what is the predicted class label given by the SVM model you have developed?

Options :

A. ✖ Positive class

B. ✔ Negative class

AppDev 1

Number of Questions :	17
Section Marks :	50

Question Number : 125 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DIPLOMA LEVEL: MODERN APPLICATION DEVELOPMENT 1"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?
CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

A. ✔ YES

B. ✖ NO

Question Number : 126 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following two tables:

Table 1: Article

article_id	title	content
1	Title 1	This is my first article
2	Title 2	This is my second article
3	Title 3	This is my third article.

Table 2: User

user_id	user_name	Email_id
1	Koushik	xyz@gmail.com
2	Ram	abc@gmail.com
3	Prashant	def@gmail.com

Suppose we build a relationship table i.e., "article_authors" between the table 1 and table 2 in such a way that the "article_id" of the Article table and "user_id" of User table becomes foreign keys in the"article_authors" table. Now assuming a table 3 is created, which of the following queries will return the count of all the users from the User table that have article_id=1.

Options :

A. ✔
```
Select
count(user_name)
FROM
user, article_authors
WHERE
article_id=1 and user.user_id=article_authors.user_id;
```

B. ✖
```
Select
user_name
FROM
user, article_authors
WHERE
article_id=2 and user.user_id=article_authors.user_id;
```

C. ✖
```
Select
count(user_name)
FROM
user, article_authors
WHERE
article_id=1;
```

D. ✖ None of these

Question Number : 127 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Two models 'Customer' and 'Order' have to be created in the database and they are related by a one-to-many relationship. Assuming that `flask_sqlalchemy` is to be used to create these models, which of the following will correctly achieve the requirements?

Options :

A. ✖
```
class Customer(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    cust_name = db.Column(db.String(50))

class Order(db.Model):
    ord_id = db.Column(db.Integer, primary_key=True)
    ord_name = db.Column(db.String(50))
    customer_id = db.Column(db.Integer, db.ForeignKey('customer.id'))
```

B. ✖
```
class Customer(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    cust_name = db.Column(db.String(50))
    orders = db.relationship(backref='customer')

class Order(db.Model):
    ord_id = db.Column(db.Integer, primary_key=True)
    ord_name = db.Column(db.String(50))
    customer_id = db.Column(db.Integer, db.ForeignKey('id'))
```

C. ✔
```
class Customer(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    cust_name = db.Column(db.String(50))
    orders = db.relationship('Order', backref='customer')

class Order(db.Model):
    ord_id = db.Column(db.Integer, primary_key=True)
    ord_name = db.Column(db.String(50))
    customer_id = db.Column(db.Integer, db.ForeignKey('customer.id'))
```

D. ✖ None of these

Question Number : 128 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the code below.

```
from flask import Flask, jsonify

app=Flask(__name__)

prog_languages=[{'course':'C++'},{'course':'Python'},{'course':'Java'}]

@app.route('/home', methods=['GET'])
def func1():
    return jsonify({'The list of Programming languages': prog_languages})

if __name__=='__main__':
    app.run(debug=True)
```

If the above flask application is running locally on "http://127.0.0.1:5000", what will the browser render for URL "http://127.0.0.1:5000/home"?

Options :

```
"The list of Programming languages":
  {
     "course": "C++"
  },
  {
     "course": "Python"
  },
  {
     "course": "Java"
  }
```
A. ✖

```
"The list of Programming languages": "C++", "Python", "Java"
```
B. ✖

C. ✔

```
{
    "The list of Programming languages": [
        {
            "course": "C++"
        },
        {
            "course":"Python"
        },
        {
            "course": "Java"
        }

    ]
}
```

D. ✖   None of these

Question Number : 129 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the below Python code which takes argument from the command line.
dummy.py

```
import sys
print("Script name/path executed:",sys.argv[0])
print("Number of arguments:",len(sys.argv))
print("Argument List:",str(sys.argv))
```

Which of the following will be the output for the command given below:
python dummy.py hello MAD1 BSc

Options :

```
    Script name/path executed: dummy.py
    Number of arguments: 3
```
A. ✖   Argument List: "['dummy.py', 'hello', 'MAD1', 'Bsc']"

B. ✔

```
Script name/path executed: dummy.py
Number of arguments: 4
Argument List: ['dummy.py', 'hello', 'MAD1', 'Bsc']
```

C. ✖
```
    Script name/path executed: dummy.py
    Number of arguments: 3
    Argument List: ['dummy.py', 'hello', 'MAD1', 'Bsc']
```

D. ✖
```
    Script name/path executed: dummy.py
    Number of arguments: 4
    Argument List: "['dummy.py', 'hello', 'MAD1', 'Bsc']"
```

Question Number : 130 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following Python code.

```python
from flask import Flask
from flask_restful import Api, Resource

app = Flask(__name__)
api = Api(app)

def prime(num):
    factors = []
    for i in range(2,num):
        if num % i == 0:
            factors.append(i)
    if len(factors) == 0:
        return True
    else:
        return False

def fact(num):
    fact = 1
    for i in range(1,num+1):
        fact *= i
    return fact

class numbertrick(Resource):
    def get(self,num):
        num = int(num)
        if prime(num):
            return num**2
        else:
            return fact(num)

api.add_resource(numbertrick, '/api/result/<num>')

if __name__ == '__main__':
    app.run(debug = True)
```

If the server is running locally on 'http://127.0.0.1:5000/', what will be the out for the URLs: 'http://127.0.0.1:5000/api/result/7' and 'http://127.0.0.1:5000/api/result/6' respectively?

Options :

A. ✖ 49 and 36

B. ✖ 5040 and 720

C. ✔ 49 and 720

D. ✖ 5040 and 36

Question Number : 131 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following Python code snippet.

```
from flask import Flask
from flask_restful import Api, Resource, reqparse

app = Flask(__name__)
api = Api(app)

parser = reqparse.RequestParser()
parser.add_argument('book_id', type = int, help = 'book_id must be an
integer and cannot be empty', required = True)
parser.add_argument('book_name', type = str , help = 'book_name must be a
string and cannot be empty', required = True)

class Library(Resource):
    def get(self):
        args = parser.parse_args()
        Id = args['book_id']
        name = args['book_name']
        return f"The book: { name }, having book-id { Id } is issued to the user"

api.add_resource(Library, '/info')

if __name__ == "__main__":
    app.run(debug = True)
```

If the server is running locally on the URL: 'http://127.0.0.1:5000', what will be the output if the following code is run on the terminal?

```
from requests import get

response = get("http://127.0.0.1:5000/info",
data = {'book_id': '112233', 'book_name': 127 })
print(response.text)
```

Options :

```
{
    "message": {
        "book_id": "book_name must be an integer and cannot be empty"
    }
}
```
A. ✖

```
{
    "message": {
        "book_name": "book_name must be a string and cannot be empty"
    }
}
```
B. ✖

C. ✔ "The book: 127, having book-id 112233 is issued to the user"

```
{
    "message": {
        "book_id": "book_name must be an integer and cannot be empty"
    }
}
```

```
{
    "message": {
        "book_name": "book_name must be a string and cannot be empty"
    }
}
```
D. ✖

Question Number : 132 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

A flask app and an HTML file are given below.
Python file: app.py

```
from flask import Flask, render_template

app = Flask(__name__)

@app.route('/')
def home():
    return '<p>This is a HTML document</p>'

@app.route('/home', methods=['GET','POST'])
def function_1():
    products = ['Television','Refrigerator','Mobile Phone']
    statement = 'This is the list of the devices we generally find in our homes.'
    category = 'Electronic gadgets'
    return render_template('index.html', statement=statement, category = category,
    products = products)

if __name__=='__main__':
    app.run(debug=True)
```

HTML file: index.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>My Title</title>
  </head>
  <body>
    <h3> Info: {{ statement }}
     These are {{ category }}</h3>
    <p>The list of the devices are:</p>
    {% for product in products %}
      <h4> {{ product }} </h4>
    {% endfor %}
</body>
</html>
```

How the above flask application will render the given HTML file, if it is running on URL
"http://127.0.0.1:5000/home"?

Options :

A. ✖ It will show a 404 error.

B. ✔

It will render :
Info: This is the list of the devices we generally find in our homes.
These are Electronic gadgets
The list of the devices are:

Television
Refrigerator
Mobile Phone

C. ✖ It will render "This is an HTML document" on the webpage.

D. ✖ None of these

Question Number : 133 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the code below.

```
from flask import Flask, jsonify
app = Flask(__name__)

info = {
"brand": "BMW",
"model": "9875700",
"release_year": 1970
}

@app.route('/info/<string:strng>', methods=['GET'])
def home(strng):
    if info["brand"] == strng:
        return jsonify({'Info': info})
    return "Model information is not Available"

if __name__=='__main__':
    app.run(debug=True)
```

If the above flask application is running locally on "http://127.0.0.1:5000", what will the browser render for the URL "http://127.0.0.1:5000/info/BMW"?

Options :

A. ✖ It will throw 404 "Page not found" error.

```
{
    "Info": {
        "brand": "BMW",
        "model": "9875700",
        "release_year": 1970
    }
B. ✔ }
```

```
"Info": {
    "brand": "BMW",
    "model": "9875700",
    "release_year": 1970
}
C. ✖
```

D. ✖ None of these

Question Number : 134 Question Type : MSQ

Correct Marks : 2

Question Label : Multiple Select Question

Consider the following code.

```python
from flask import Flask
from flask_restful import Resource, Api

app = Flask(__name__)
api = Api(app)

fruit_list={
1:"Apple", 2: "Pear", 3: "Mango"
}
class Fruit_list(Resource):
    def get(self):
        return fruit_list

class Fruit(Resource):
    def get(self, f_id):
        return fruit_list[f_id]

api.add_resource(Fruit_list, '/')
api.add_resource(Fruit, '/<int:f_id>')


if __name__ == '__main__':
    app.run(debug=True)
```

If this flask application is running locally on "http://127.0.0.1:5000", then which of the following statements is/are true about the code snippet given above?

Options :

A. ✖ On the URL, "http://127.0.0.1:5000/", the browser will show 'page not found' error.

On the URL, "http://127.0.0.1:5000/", the browser will render.
```
{
    "1": "Apple",
    "2": "Pear",
    "3": "Mango"
```
B. ✔ }

On the URL, "http://127.0.0.1:5000/3", the browser will render
        "Pear"
C. ✖

On the URL, "http://127.0.0.1:5000/2", the browser will render
    "Pear"
D. ✔

Question Number : 135 Question Type : MSQ

Correct Marks : 2

Question Label : Multiple Select Question

Which of the following statements is/are correct about a static web page and a dynamic web page?

Options :

A. ✔ In static webpage information rarely changes, whereas in dynamic webpage, information can change frequently.

B. ✖ Static web pages always need a database to store information.

C. ✖ Static web pages are generated at runtime.

D. ✔ Dynamic web pages are generated at runtime.

Question Number : 136 Question Type : MSQ

Correct Marks : 4.5

Question Label : Multiple Select Question

Consider the following Python code and an HTML document given below.

```python
from flask import Flask, render_template, redirect

app = Flask(__name__)
limit = 6
@app.route('/colour/purple/<int:initial>')
def purple(initial):
    style = {'background-color':'purple', 'color':'white'}
    if initial != limit:
        initial += 2
        return redirect(f'/colour/yellow/{initial}')
    else:
        return render_template('display.html', style = style)

@app.route('/colour/yellow/<int:initial>')
def yellow(initial):
    style = {'background-color':'yellow', 'color':'black'}
    if initial != limit:
        initial -= 1
        return redirect(f'/colour/purple/{initial}')
    else:
        return render_template('display.html', style = style)

if __name__ == "__main__":
    app.run(debug  = True)
```

HTML file: templates/display.html

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Doc</title>
    </head>
    <body>
      <div style = "width: 200px; color: {{style['color']}}};
        background-color: {{style['background-color']}}}">
        This is how it is displayed
      </div>
    </body>
</html>
```

If the server is running locally on URL: "http://localhost:5000", which of the following is/are correct?

Options :

A. ✔ for URL: "http://localhost:5000/colour/purple/0", the rendered output will have text in black colour with yellow background

B. ✖ for URL: "http://localhost:5000/colour/purple/0", the rendered output will have text in white colour with purple background

for URL: "http://localhost:5000/colour/purple/0", the final URL on the URL

C. ✗ tab will be "http://localhost:5000/colour/purple/6"

for URL: "http://localhost:5000/colour/purple/0", the final URL on the URL

D. ✔ tab will be "http://localhost:5000/colour/yellow/6"

Question Number : 137 Question Type : MCQ

Correct Marks : 4.5

Question Label : Multiple Choice Question

Consider the following HTML file with integrated JavaScript in it.

```
<!DOCTYPE html>
<html>
    <head>
        <title>Script</title>
    </head>
    <body>
        <script>
            var variable = 5;
            (()=>{
                variable_3 = 25;
                console.log(variable_3);
                var variable_3 = 20;
                variable_2 = 15;
                console.log(variable);
            })();

            console.log(variable_2);
            console.log(variable_3);
            var variable = 30;
        </script>
    </body>
</html>
```

What will be the out on the browser's console?

Options :

A. ✗ 25 5 15

B. ✗ 25 5 15 20

C. ✗ 25 5 20 and an error " Variable_2 is Not defined"

D. ✓ 25 5 15 and an error " Variable_3 is Not defined"

Question Number : 138 Question Type : MSQ

Correct Marks : 3

Question Label : Multiple Select Question

Consider the following code.

```
from flask import Flask
import logging

app = Flask(__name__)

logging.basicConfig(filename='event.log', level=logging.DEBUG,
    format=f'%(asctime)s %(levelname)s %(name)s %(threadName)s : %(message)s')

@app.route('/logging')
def foo():
    app.logger.warning('A warning level log.')
    app.logger.error('An error level log.')
    app.logger.info('An Info level log.')
    return "One of the main reason of logging is to debug errors."
app.run(host='localhost', debug=True)
```

Which of the following statements is/are true in case this flask app is running on the URL "http://localhost:5000/logging"?

Options :

A. ✓ The logs are stored in files with '.log' extension.

B. ✗ A log file "record" will be created inside the flask application folder.

C. ✗ All the log messages about the application after running it will be displayed in the console

D. ✓ Whenever we hit the URL "http://localhost:5000/logging", the return message i.e., "One of the

main reason of logging is to debug errors" will be displayed on the screen.

Question Number : 139 Question Type : MSQ

Correct Marks : 3

Question Label : Multiple Select Question

A model 'Article' is to be created in the database, with fields and their properties given in the table below.

article_id	title	content
1	Title 1	This is my first article.
2	Title 2	This is my second article.
3	Title 3	This is my third article.

Assuming that flask_sqlachemy is to be used in the 'main.py' file, which of the following statements is/are true regarding the query written below?

```
>>> from main import Article
>>> from main import db
>>> update = Article.query.filter_by(article_id=2).first()
>>> update.title='Title 5'
>>> db.session.commit()
>>> delete_this = Article.query.filter_by(article_id=2).first()
>>> db.session.delete(delete_this)
>>> db.session.commit()
```

Options :

A. ✔ The above query will update the record having article_id=2 and changes the title column to 'Title 5'.

B. ✖ The above query will create one record having article_id=2 and title "Title 5".

C. ✖ The above query will delete all the records from the Article table.

D. ✔ The above query will delete the record having article_id=2.

Question Number : 140 Question Type : SA

Correct Marks : 4.5

Question Label : Short Answer Question

Software packages A and B of complexity O(nlogn) and O(n), respectively, spend exactly $T_A(n) = c_A n$ $log(n)$ and $T_B(n) = c_B n$ milliseconds to process n data items. During a test, the average time of

processing n = 10^4 data items with the package A and B is 200 milliseconds and 600 milliseconds, respectively. Which software package would you recommend as the best choice if up to n = 10^{10} items are to be processed.

NOTE: Your answer should not exceed 50 words.

Response Type : Alphanumeric

Evaluation Required For SA : No

Max Word Count : 50

Show Word Count : Yes

Min Word Count : 0

Highlight min word : Yes

Single Line Response : No

Number of Rows : 10

Number Of Columns : 70

Text Areas : PlainText

Question Number : 141 Question Type : SA

Correct Marks : 4.5

Question Label : Short Answer Question

A magnetic disk operating at 6000 rpm is being used to store data. The disk can only spin in one direction at a constant speed of 6000 revolutions per minute. If the operating system sends a request to the disk controller to fetch data from the disk, but by the time the request reached the disk controller, the information had already moved a quarter circle ahead from the reader, what will be the latency (in milliseconds) before it can start retrieving data?

NOTE: Enter your answer in one decimal place.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

7.5

AppDev 2

Number of Questions :   17

Section Marks :   50

Question Number : 142 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

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CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

A. ✔ YES

B. ✖ NO

Question Number : 143 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following JavaScript program, and predict the output if executed.