

## Student Result

**Student Name:** Prashik besekar

**Exam:** Python , Django , Angular Programming

**Score:** 36.0/45.0

**Percentage:** 80.00%

### Question-wise Summary

| Sr.no | Question                                                                        | Selected Answer                                                  | Correct Answer                                                   |
|-------|---------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| 1     | Which type of Programming does Python support?                                  | all of the mentioned                                             | all of the mentioned                                             |
| 2     | What does the @staticmethod decorator do in a Python class?                     | Defines a method that doesn't receive an implicit first argument | Defines a method that doesn't receive an implicit first argument |
| 3     | In Django, which method is used to create database tables based on your models? | manage.py makemigrations and manage.py migrate                   | manage.py makemigrations and manage.py migrate                   |

|   |                                                                                                                                                                                                                                                                                                                                                                             |                         |                         |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|
| 4 | <p>What will be the output of the following Python code?</p> <pre>def create_multipliers():<br/>    return<br/>    [lambda<br/>      x: i * x for<br/>      i in<br/>      range(4)]<br/>functions<br/>=<br/>create_multipliers()<br/>results =<br/>[f(2) for f<br/>in<br/>functions]<br/>print(results)</pre>                                                              | <p>[6, 6, 6,<br/>6]</p> | <p>[6, 6, 6,<br/>6]</p> |
| 5 | <p>What will be the output of the following Python code?</p> <pre>def create_funcs():<br/>    funcs = []<br/>    for i in<br/>    range(3):<br/>        def f(x,<br/>            i=i):<br/>            return x<br/>            + i<br/>        funcs.append(f)<br/>    return<br/>    funcs<br/>funcs =<br/>create_funcs()<br/>print([f(10)<br/>for f in<br/>funcs])</pre> | <p>[10, 10,<br/>10]</p> | <p>[10, 11,<br/>12]</p> |

6

```
What will  
be the  
output of  
the  
following  
Python  
code?  
def  
logger(func):  
def  
wrapper(*args,  
**kwargs):  
print(f"Calling  
{func.__name__}")  
return  
func(*args,  
**kwargs)  
return  
wrapper  
@logger  
def  
add(x, y):  
return x  
+ y  
result  
=  
add(add(1,  
2),  
add(3,  
4))  
print(result)
```

**Calling  
add (3  
times),  
then 10**

**Calling  
add (3  
times),  
then 10**

7

What will  
be the  
Output of  
the  
Following  
Code?  
class  
Weird:  
def  
\_\_init\_\_(self,  
x): self.x  
= x def  
\_\_eq\_\_(self,  
other):  
return  
self.x ==  
other.x a  
=  
Weird(10)  
b =  
Weird(10)  
d = {a:  
"Hello",  
b:  
"World"}  
print(len(d),  
d[a])

Error

2 Hello

|   |                                                                                                                                                                                                                                                         |         |         |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| 8 | <p>What will be the Output of the Following Code?</p> <pre>def tricky(n, cache={}): if n in cache: return cache[n] if n &lt;= 1: return 1 cache[n] = tricky(n-1) + tricky(n-2) return cache[n] print(tricky(4)) print(tricky(3)) print(tricky(2))</pre> | 5, 3, 2 | 5, 3, 2 |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|

|   |                                                                                                                                                                                                                                                                                                                             |                                  |                                  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| 9 | <p>What will be the Output Of the Following Code?</p> <pre>def subgen():<br/>    yield 1<br/>    yield 2<br/>    return 3<br/>def main():<br/>    result =<br/>    yield<br/>    from<br/>    subgen()<br/>    print("Returned:",<br/>    result) g<br/>    = main()<br/>    for val in<br/>    g:<br/>    print(val)</pre> | <p>1, 2,<br/>Returned:<br/>3</p> | <p>1, 2,<br/>Returned:<br/>3</p> |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|

10

What will  
be the  
Output of  
the  
Following  
Code?  
class  
Key: def  
\_\_init\_\_(self,  
val):  
self.val =  
val  
def  
\_\_eq\_\_(self,  
other):  
return  
self.val  
==  
other.val  
k1 =  
Key(1)  
k2 =  
Key(1)  
d  
= {k1: 'a',  
k2: 'b'}  
print(len(d))

1

2

11

What will  
be the  
Output of  
the  
Following  
Code?

```
def  
dec1(func):  
    def  
    wrapper(*args):  
        print("dec1")  
        return  
        func(*args)  
    return  
    wrapper  
    def  
    dec2(func):  
        def  
        wrapper(*args):  
            print("dec2")  
            return  
            func(*args)  
        return  
        wrapper  
    @dec1  
    @dec2  
    def  
    hello():  
        print("Hello")  
    hello()
```

**dec2,**  
**dec1,**  
**Hello**

**dec1,**  
**dec2,**  
**Hello**

|    |                                                                                                                                                                                                                                                                                                     |                                                                          |                                                                          |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 12 | <p>What will be the Output of the Following Code?</p> <pre>def sub():<br/>    yield 1<br/>    yield 2<br/>    return "Done"<br/>def<br/>main():<br/>    x = yield<br/>    from sub()<br/>    print("Subgen returned:",<br/>    x)<br/>    g = main()<br/>    for i in g:<br/>        print(i)</pre> | <p><b>1 2</b><br/><b>Subgen</b><br/><b>returned:</b><br/><b>Done</b></p> | <p><b>1 2</b><br/><b>Subgen</b><br/><b>returned:</b><br/><b>Done</b></p> |
| 13 | <p>What will be the Output of the Following Code?</p> <pre>ef<br/>func(a,<br/>L=[]):<br/>    L.append(a)<br/>    return L<br/>print(func(1))<br/>print(func(2))<br/>print(func(3))</pre>                                                                                                            | <p><b>[1], [1,</b><br/><b>2], [1, 2,</b><br/><b>3]</b></p>               | <p><b>[1], [1,</b><br/><b>2], [1, 2,</b><br/><b>3]</b></p>               |

|    |                                                                                                                                                                                                                                                         |                                                      |                                                     |
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| 14 | Which of the following operations will NOT trigger model.save() or signals (pre_save/post_save)?                                                                                                                                                        | <b>MyModel.objects.bulk_create(MyModel.objects.b</b> | <b>MyModel.objects.b</b>                            |
| 15 | What will be printed?<br>Component:<br><pre>@Component({   selector: 'app-test',   template: '{{ value }}' }) class TestComponent implements OnInit {   value = 'initial';   ngOnInit() {     setTimeout(() =&gt; this.value = 'changed', 0); } }</pre> | <b>Changed</b>                                       | <b>Initial</b>                                      |
| 16 | What does providing a service in the component (instead of module) do?                                                                                                                                                                                  | <b>Creates a new service instance per component</b>  | <b>Creates a new service instance per component</b> |

|    |                                                                                                                                                            |                                                    |                                                    |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| 17 | n a Django + Angular app using REST API, what is a good reason to disable CSRF middleware?                                                                 | Angular uses JWT Auth and doesn't send CSRF tokens | Angular uses JWT Auth and doesn't send CSRF tokens |
| 18 | If an Angular frontend calls a Django API and receives a CORS error, what should be done?                                                                  | Configure CORS_ORIGIN_ALLOW_ALL in Django          | Configure CORS_ORIGIN_ALLOW_ALL in Django          |
| 19 | What will be the Output of the Following Code?<br>stack = []<br>for i in range(3):<br>stack.append(i)<br>for i in range(2):<br>stack.pop()<br>print(stack) | [0]                                                | [0]                                                |

|    |                                                                                                                                                                                                                       |                                                                          |                                           |
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| 20 | <p>What will be the Output of the Following Code? s = "((())"</p> <pre>stack = [] for ch in s:     if ch == '(':         stack.append(ch)     else:         if stack:             stack.pop() print(len(stack))</pre> | <b>Zero<br/>always</b>                                                   | <b>Extra '('<br/>remaining</b>            |
| 21 | <p>During project setup, if ng serve fails with the error "Local workspace file ('angular.json') could not be found", what is the likely issue?</p>                                                                   | <b>The<br/>angular.json<br/>file is<br/>missing<br/>or<br/>misplaced</b> | <b>Problems<br/>with<br/>node_modules</b> |
| 22 | <p>In Angular, which file is used to define the set of modules, components, and services?</p>                                                                                                                         | <b>app.module.ts</b>                                                     | <b>app.module.ts</b>                      |

|    |                                                                                                                                                    |                                                                                                             |                                                                                                             |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 23 | What will be the Output of the Following Code?<br>def f(x, l=[]):<br>for i in range(x):<br>l.append(i*i)<br>return l<br>print(f(3))<br>print(f(2)) | <b>[0, 1, 4]</b><br><b>[0, 1, 4]</b>                                                                        | <b>[0, 1, 4,</b><br><b>0, 1]</b>                                                                            |
| 24 | In Angular (≥2+), what is the difference between NgModule.imports and NgModule.exports?                                                            | <b>imports declares dependencies the module needs, exports makes parts available to other modules</b>       | <b>imports declares dependencies the module needs, exports makes parts available to other modules</b>       |
| 25 | Which of these is a valid way to lazily load a module in Angular's router (from Angular 8+)?                                                       | <b>{ path: 'admin', loadChildren: () =&gt; import('./admin/admin.module').then(m =&gt; m.AdminModule) }</b> | <b>{ path: 'admin', loadChildren: () =&gt; import('./admin/admin.module').then(m =&gt; m.AdminModule) }</b> |

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| 26 | <p>Given the following models:</p> <pre>class Author(models.Model):     name = models.CharField(max_length=100) class Book(models.Model):     title = models.CharField(max_length=100)     author = models.ForeignKey(Author, on_delete=models.CASCADE, related_name='books')</pre> <p>Which of these queries returns all Author instances that have no books?</p> | <p><code>Author.objects.filter(books__isnull=True)</code></p> | <p><code>Author.objects.filter(books__isnull=False)</code></p> |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------|

|    |                                                                                                                                                                                       |                                                                               |                                                                               |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 27 | What happens when you call save() on a Django model instance without specifying force_insert or force_update, and the instance has a primary key that already exists in the database? | <b>It will do an UPDATE</b>                                                   | <b>It will do an UPDATE</b>                                                   |
| 28 | In Django REST Framework (DRF), what is the main function of SerializerMethodField?                                                                                                   | <b>It enables custom read-only fields whose value is computed by a method</b> | <b>It enables custom read-only fields whose value is computed by a method</b> |

|    |                                                                                                          |                                                                                                                              |                                                                                                                              |
|----|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 29 | Which of the following is the most efficient way to handle a large number of background tasks in Django? | <b>Integrating with a task queue like Celery.</b>                                                                            | <b>Integrating with a task queue like Celery.</b>                                                                            |
| 30 | How would you implement real-time communication (e.g., chat) in a Django application?                    | <b>Using Django Channels for WebSockets.</b>                                                                                 | <b>Using Django Channels for WebSockets.</b>                                                                                 |
| 31 | What is the primary purpose of ChangeDetectionStrategy.OnPush in Angular?                                | <b>To improve performance by only checking for changes when input properties change or an event is explicitly triggered.</b> | <b>To improve performance by only checking for changes when input properties change or an event is explicitly triggered.</b> |

|    |                                                                                                                                                      |                                                                                                                          |                                                                                                                          |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 32 | How can you ensure proper communication between two unrelated Angular components without a direct parent-child relationship?                         | <b>Utilizing a shared service with a Subject or BehaviorSubject.</b>                                                     | <b>Utilizing a shared service with a Subject or BehaviorSubject.</b>                                                     |
| 33 | When integrating Django as a backend and Angular as a frontend, what is the recommended approach for handling user authentication and authorization? | <b>Implementing token-based authentication (e.g., JWT) where Django issues tokens and Angular stores and sends them.</b> | <b>Implementing token-based authentication (e.g., JWT) where Django issues tokens and Angular stores and sends them.</b> |

|    |                                                                                                                                                             |                                                                                                              |                                                                                                              |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 34 | <p>What will be the Output of the Following Code?</p> <pre>Python x = 10 def outer_func(): x = 5 def inner_func(): print(x) inner_func() outer_func()</pre> | <b>1</b>                                                                                                     | <b>5</b>                                                                                                     |
| 35 | <p>What is the best data structure to implement a cache with FIFO eviction policy?</p>                                                                      | <b>Queue + HashMap</b>                                                                                       | <b>Queue + HashMap</b>                                                                                       |
| 36 | <p>What is the purpose of csrf_token in a Django form?</p>                                                                                                  | <b>To prevent Cross-Site Request Forgery (CSRF) attacks by ensuring the request comes from your own site</b> | <b>To prevent Cross-Site Request Forgery (CSRF) attacks by ensuring the request comes from your own site</b> |

|    |                                                                           |                                                                                                              |                                                                                                              |
|----|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 37 | What is the main advantage of lazy loading feature modules in Angular?    | <b>It allows for loading modules on demand, which reduces the initial application load time.</b>             | <b>It allows for loading modules on demand, which reduces the initial application load time.</b>             |
| 38 | What is the main purpose of the RouterModule.forRoot() method in Angular? | <b>To register the routing service and provide the router configuration for the root application module.</b> | <b>To register the routing service and provide the router configuration for the root application module.</b> |

|    |                                                                                  |                                                                                                                                                                                 |                                                                                                                                                                                 |
|----|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39 | What is the difference between constructor and ngOnInit in an Angular component? | <b>constructor is for dependency injection and simple initializations, while ngOnInit is for more complex logic that should run after the component's inputs are available.</b> | <b>constructor is for dependency injection and simple initializations, while ngOnInit is for more complex logic that should run after the component's inputs are available.</b> |
| 40 | What does the queryset attribute in a Django generic ListView define?            | <b>The list of objects that the view will display</b>                                                                                                                           | <b>The list of objects that the view will display</b>                                                                                                                           |
| 41 | In the context of exception handling, what is the purpose of the finally block?  | <b>It is always executed, regardless of whether an exception occurred or not.</b>                                                                                               | <b>It is always executed, regardless of whether an exception occurred or not.</b>                                                                                               |

|    |                                                                           |                                                                                               |                                                                                               |
|----|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 42 | What does the pass statement do in Python?                                | <b>It acts as a placeholder where code is syntactically required but no action is needed.</b> | <b>It acts as a placeholder where code is syntactically required but no action is needed.</b> |
| 43 | How do you pass data from a child component back up to a parent component | <b>B) Using @Output() and an EventEmitter.</b>                                                | <b>B) Using @Output() and an EventEmitter.</b>                                                |
| 44 | In the Django MVT (Model-View-Template) architecture, what is the "T"?    | <b>Template</b>                                                                               | <b>Template</b>                                                                               |
| 45 | How do you pass data from a parent component to a child component?        | <b>Using the @Input() decorator.</b>                                                          | <b>Using the @Input() decorator.</b>                                                          |