Follow the instruction:-

i. Before going through below exercises please visit the link given below, where you can experience the coding standard that each and every developer should follow.

ii. This Code Conventions for the Java Programming Language document contains the standard conventions that Sun follow and recommend that we should follow. It covers filenames, file organization, indentation, comments, declarations, statements, white space, naming conventions, programming practices and includes a code example.

iii. LINK - http://www.oracle.com/technetwork/java/codeconv-138413.html

Basic Java Lab Exercise
Duration: 2 Hours

1. **What is the output of the following program**

```
interface Course
{
	String name = "Naresh";
	int duration = 1;
	void addCourse();
	abstract void addDuration();
	abstract void addfaculty();
}
class Impl implements Course
{
	@Override
	public void addCourse() {
		System.out.println("Cource Added");
	}
	@Override
	public void addDuration() {
		System.out.println("Add Duration");
	}
	@Override
	public void addfaculty() {
		System.out.println("Add Faculty");
	}
}
public class Abstract
{
	public static void main(String[] args) {
```

```
                Course course = new Impl();
                course.addCourse();

                Impl impl = new Impl();
                impl.addDuration();
                impl.addfaculty();
        }
}
```

Answer :
Cource Added
Add Duration
Add Faculty

2. **What is the output of the following program**

```
interface Impl
{
        int a = 0;
}
class NIT implements Impl
{
        public void display() {
                a++;
                System.out.println(a);
        }
}
public class Abstract
{
        public static void main(String[] args) {
                NIT nit = new NIT();
                nit.display();
        }
}
```

Answer :
Error : The final field Impl.a cannot be assigned in NIT class

3. **What is the output of the following program**

```
interface Course
{
        void course();
}

interface Faculty
{
        void faculty();
}
class Impl implements Course,Faculty
```

```
{
	@Override
	private void course() {
		System.out.println("Course");
	}

	@Override
	void faculty() {
		System.out.println("Faculty");
	}
}
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.course();
		impl.faculty();
	}
}
```

Answer : Compile Time Error

4. **What is the output of the following program**

```
abstract class Course
{
	abstract void course();
}

abstract class Faculty
{
	abstract void faculty();
}
class Impl extends Course
{
	@Override
	void course() {
		System.out.println("Course");
	}

	Faculty faculty = new Faculty() {

		@Override
		void faculty() {
			System.out.println("Faculty");

		}
	};
}
```

```
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.course();
		impl.faculty();
	}
}
```

Answer : Compile time error

5. **What is the output of the following program**

```
interface Course
{
	void course();
}

interface Faculty
{
	void faculty();
}
class Impl implements Course,Faculty
{
	@Override
	public void course() {
		System.out.println("Course");
	}

	@Override
	public
	void faculty() {
		System.out.println("Faculty");
	}
}
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.course();
		impl.faculty();
	}
}
```

Answer :
Course
Faculty

6. **What is the output of the following program**

```
abstract class Course
```

```
{
	abstract void course();
}

abstract class Faculty
{
	abstract void faculty();
}
class Impl extends Course
{
	@Override
	void course() {
		System.out.println("Course");
	}
	Faculty faculty = new Faculty() {

		@Override
		void faculty() {
			System.out.println("Faculty");

		}
	};
	public Faculty getFaculty() {
		return faculty;
	}
}
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.course();
		impl.getFaculty();
	}
}
```

Answer : Course

7. **What is the output of the following program**

```
abstract class Course
{
	abstract void course();
}

abstract class Faculty
{
	abstract void faculty();
}
class Impl extends Course
```

```
{
	@Override
	void course() {
		System.out.println("Course");
	}
}
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.course();
		Faculty faculty = new Faculty() {

			@Override
			void faculty() {
				System.out.println("Faculty");

			}
		};
		faculty.faculty();
	}
}
```

Answer : Course

8. What is the output of the following program

```
interface NIT
{
  void department();
  default void course()
  {
    System.out.println("Java");
  }
}
class Impl implements NIT
{
  public void department()
  {
    System.out.println("Software");
  }
}

public class Abstract
{
  public static void main(String[] args)
  {
    Impl impl  = new Impl();
    impl.department();
```

```
    impl.course();
  }
}
```
Answer :
Software
Java

9. What is the output of the following code

```
interface NIT
{
  void department();
  default void course()
  {
    System.out.println("Java");
  }
}
class Impl implements NIT
{
  public void department()
  {
    System.out.println("Software");
  }
  //override default method
  public void course()
  {
    System.out.println("Python");
  }
}
public class Abstract
{
  public static void main(String[] args)
  {
    Impl impl  = new Impl();
    impl.department();
    impl.course();
  }
}
```
Answer :
Software
Python

10. What is the output of the following code

```
interface NIT
{
        static void course() // abstract not applicable
        {
                System.out.println("Java");
```

```
	}
	void department();
}
class Impl implements NIT
{
	@Override
	public void department() {
		System.out.println("Software");
	}
}
public class Abstract
{
	public static void main(String[] args) {
		Impl impl = new Impl();
		impl.department();
		impl.course();
	}
}
```

Answer : Compile time Error

11 Choose the correct answer for the following program

```
abstract class NIT
{
	private void print(); // line 1
}
public class Abstract
{
	public static void main(String[] args) {
		NIT nit = new NIT()
		{
			public void print() {
				System.out.println("nit");
			}
		};
		nit.print(); //line 2
	}
}
```

A. line 1: This method requires a body instead of semicolon
line 2 : No error

B. line 1 : No error
line 2: This method print() from the type NIT is not visible

C. line 1 : This method requires a body instead of semicolon
line 2 : This method print() from the type NIT is not visible

D. line1 : No error
line 2 : No error

Answer : C

12 **Choose the correct answer for the following program**

```
abstract class NIT
{
        protected void print(); // line 1
}

public class Abstract
{
        public static void main(String[] args) {
                NIT nit = new NIT()
                {
                        public void print() {
                                System.out.println("nit");
                        }
                };
                nit.print(); //line 2
        }
}
```

A. line 1: This method requires a body instead of semicolon
line 2 : No error

B. line 1 : No error
line 2: This method print() from the type NIT is not visible

C. line 1 : This method requires a body instead of semicolon
line 2 : This method print() from the type NIT is not visible

D. line1 : No error
line 2 : No error

Answer : A

13 **Choose the correct answer for the following program**

```
abstract class NIT
{
        private abstract void print(); // line 1
}

public class Abstract
{
        public static void main(String[] args) {
                NIT nit = new NIT()
                {
                        public void print() {
                                System.out.println("nit");
```

```
                }
        };

        nit.print(); //line 2
    }
}
```

A. line 1 : No error
line 2 : No error

B. line 1 : The abstract method print in type NIT can only set a visibility modifier, one of public or protected
line 2 : This method print() from the type NIT is not visible

C. line 1 : The abstract method print in type NIT can only set a visibility modifier, one of public or protected
line 2 : No error

D. line 1 : No error
line 2 : This method print() from the type NIT is not visible

Answer : B

14 **Choose the correct answer for the following program**

```
abstract class NIT
{
    protected abstract void print(); // line 1
}

public class Abstract
{
    public static void main(String[] args) {
        NIT nit = new NIT()
        {
            public void print() {
                System.out.println("nit");
            }
        };

        nit.print(); //line 2
    }
}
```

A. line 1 : No error
line 2 : No error

B. line 1 : The abstract method print in type NIT can only set a visibility modifier, one of public or protected
line 2 : This method print() from the type NIT is not visible

C. line 1 : The abstract method print in type NIT can only set a visibility modifier, one of public or protected

line 2 : No error

D. line 1 : No error

line 2 : This method print() from the type NIT is not visible

Answer : A