**Program 1:-**

class Company {

  void companyName() {

    print('Google');

  }

}

class Employee extends Company {

  void companyName() {

    print('Apple');

  }

}

void main() {

  Company obj = Employee();

  obj.companyName();

}

O/P:- Apple

**Program:-2**

import 'dart:web\_audio';

class Demo {

  void fun();

}

class Demo1 implements Demo {

  void fun() {}

}

void main() {

  Demo obj = Demo1();

}

Error: The non-abstract class 'Demo' is missing implementations for these members: - Demo.fun Try to either - provide an implementation, - inherit an implementation from a superclass or mixin, - mark the class as abstract, or - provide a 'noSuchMethod' implementation. class Demo { ^^^^ ../../../../Desktop/DART/6-1-24/Polymorphism/dart2.dart:2:8: Context: 'Demo.fun' is defined here. void fun();

**Program3:-**

class Test {

  double x = 10.7;

  num fun() {

    return x;

  }

}

class Child extends Test {

  int y = 9;

  int fun() {

    var x = super.fun();

    print(x.runtimeType);

    x = 10;

    return 10;

  }

}

void main() {

  Child obj = new Child();

  obj.fun();

}

**O/P:- Double**

**Program4:-**

class Test {

  int? x;

  Test(this.x);

  void fun() {

    this.x = 99;

  }

}

class Test2 extends Test {

  int? x;

  Test2(this.x, int y) : super(y);

  void fun() {

    print(x);

    super.fun();

    print(x);

    print(super.x);

  }

}

void main() {

  Test2 obj = Test2(4, 6);

  obj.fun();

}

**O/P:-4**

**99**

**6**

**Program 5;-**

class Test {

  void fun() {

    print("Test class");

  }

  static void gun() {

    print("in static test");

  }

}

class Test2 extends Test {

  @override

  int fun() {

    super.fun();

    return 10;

  }

  @override

  void gun() {

    print("in test2 gun");

    super.gun();

  }

}

void main() {

  Test2 obj = Test2();

  obj.fun();

}

**Error: Superclass has no method named 'gun'. super.gun(); ^^^**

**Program 6:-**

class Parent {

  int x = 10;

  Parent();

  void getData() {

    print(x);

  }

}

class Child extends Parent {

  double y = 10;

  static String str = "core2web";

  Child();

  @override

  int getData() {

    print(y);

    return 10;

  }

}

void main() {

  Child obj = new Child();

  obj.getData();

}

**O/P:-**

**10.0**

**Program 7:-**

abstract class Parent {

  int x;

  int y = 7;

  Parent(this.x);

  void printData() {

    print(x);

  }

}

class Child extends Parent {

  Child(int x, int y) : super(y);

  int printData() {

    print(x);

    print(y);

    return 3;

  }

}

void main() {

  Child obj = new Child(6, 7);

  obj.printData();

}

**o/p:-7**

**7**

**Program 8:-**

class Test {

  int x = 6;

  Test();

  void printData() {

    print(x);

  }

}

class Test2 {

  int x = 9;

  Test2() {

    print("In test2");

  }

}

class Child extends Test implements Test2 {

  int x = 7;

  void printData() {

    print(super.x);

    super.printData();

  }

}

void main() {

  Child obj = new Child();

  obj.printData();

}

**O/P:-**

**6**

**7**

**Program 9:-**

abstract class Test {

  void build();

}

class test2 extends Test {

  @override

  void build() {

    super.build();

  }

}

**Error: Superclass has no method named 'build'. super.build(); ^^^^^**

**Program 10:-**

abstract class Test {

  int x;

  Test(this.x) {

    print("In constructor");

  }

  void fun() {

    print("Fun");

  }

  void gun();

}

class Test2 extends Test {

  Test2(super.x);

  void gun() {

    print("In gun");

  }

}

void main() {

  Test2 obj = new Test2(10);

  obj.fun();

  obj.gun();

}

**O/P:-**

**In constructor**

**Fun**

**In gun**

**Exited.**