Task1:

1. Advantage

- Inheritance promotes reusability. When a class inherits or derives another class, it can access all the functionality of inherited class.
- Reusability enhanced reliability. The base class code will be already tested and debugged.
- As the existing code is reused, it leads to less development and maintenance costs.
- Inheritance makes the sub classes follow a standard interface.
- Inheritance helps to reduce code redundancy and supports code extensibility.
- Inheritance facilitates creation of class libraries.

2. Disadvantage

- Inherited functions work slower than normal function as there is indirection.
- Improper use of inheritance may lead to wrong solutions.
- Often, data members in the base class are left unused which may lead to memory wastage.
- Inheritance increases the coupling between base class and derived class. A change in base class will affect all the child classes.

Example

```php
<?php
class Foo
{
      public function printItem($string)
          {
              echo 'Foo: ' . $string . PHP_EOL;
           }
           public function printPHP()
          {
           echo 'PHP is great.' . PHP_EOL;
             }
}
class Bar extends Foo
{
      public function printItem($string)
          {
              echo 'Bar: ' . $string . PHP_EOL;
          }
}
$foo = new Foo();
```

```
$bar = new Bar();
$foo->printItem('baz');      // Output: 'Foo: baz'
$foo-
>printPHP();                 // Output: 'PHP is great'
$bar->printItem('baz');      // Output: 'Bar: baz'
$bar-
>printPHP();                 // Output: 'PHP is great'
?>
```

Task2: