Lab 2: Introduction to Object-Oriented Programming Solution

2) Designing Classes

1. *Read the problem description.*

2. *Decide what classes you need to design.*

```
class Race:
    pass

class Runner:
    pass
```

3. *Sample usage.*

```
class Race:
    """
    === Sample Usage ===

    Create a race registry:
    >>> r = Race()
    >>> r.categories['lt20']
    []
    >>> r.categories['lt30']
    []
    >>> r.categories['lt40']
    []
    >>> r.categories['gt40']
    []

    Registering runners:
    >>> runner_1 = Runner('Gerhard','gerhard@gmail.com')
    >>> r.register(runner_1, 'lt40')
    >>> r.categories['lt40'][0].name
    Gerhard
    >>> runner_2 = Runner('Tom','tom@gmail.com')
    >>> r.register(runner_2, 'lt30')
    >>> r.categories['lt30'][0].name
    Tom
    >>> runner_3 = Runner('Toni','toni@gmail.com')
```

```
        >>> r.register(runner_3, 'lt20')
        >>> r.categories['lt20'][0].name
        Toni
        >>> r.register(runner_1, 'lt30')
        >>> r.categories['lt30'][1].name
        Gerhard
        """
        pass


    ...


    if __name__ == '__main__':
        import doctest
        doctest.testmod()
```

4. *Designing the interface.*