1. Обсуждение принципов визуализации данных.

Визуализация данных — это наглядное представление массивов различной информации.

Существует несколько типов визуализации:

- Обычное визуальное представление количественной информации в схематической форме: круговые и линейные диаграммы, гистограммы и спектрограммы, таблицы и различные точечные графики.

- Данные при визуализации могут быть преобразованы в форму, усиливающую восприятие и анализ этой информации: карта и полярный график, временная линия и график с параллельными осями, диаграмма Эйлера.

- Концептуальная визуализация позволяет разрабатывать сложные концепции, идеи и планы: концептуальные карты, диаграмма Ганта, графы с минимальным путем и других подобных видов диаграмм.

- Стратегическая визуализация переводит в визуальную форму различные данные об аспектах работы организаций: диаграммы производительности, жизненного цикла и графики структур организаций.

- Метафорическая визуализация - организовать структурную информацию с помощью пирамид, деревьев и карт данных.

- Комбинированная визуализация позволяет объединить несколько сложных графиков в одну схему.

2. Поиск информации на тему, выбранную студентом.

Тема: Сравнительный анализ языков C++, C Sharp.

3. Провести анализ онлайн-инструментов для визуализации данных и их возможности:

1. Сreately

Это веб-сервис со схематичными инструментами, известный своей простотой. Мощный контекстный интерфейс, смарт-объекты и специальные инструменты помогают рисовать диаграммы в 3 раза быстрее по сравнению с традиционными программами, вроде Visio. Можно рисовать блок-схемы, карты сайта, организационные диаграммы, UML-диаграммы, сетевые диаграммы, диаграммы Венна, диаграммы SWOT-анализа, карты связей, модели бизнес-процессов и многое другое с помощью этого сервиса и его настольных программ под Windows, Linux и Mac.

Основные характеристики продукта:

* Простота в использовании и интерактивный интерфейс;
* совместная работа в режиме реального времени;
* профессионально разработанные шаблоны для быстрого начала работы;
* обширный набор форм, сгруппированных в библиотеки;
* экспорт диаграмм в форматы PDF, JPG или PNG;
* настольные приложения под Windows, Linux и Mac OS для автономной работы;
* встроенный Google Image и иконка поиска Finder;
* генерация кода для встраивания диаграмм на сайты;
* организация сообщества для быстрого поиска диаграмм;
* возможность импорта изображений;
* библиотека изображений;
* имеется бесплатный тариф и пробный период для платных тарифов, от $5 в месяц или от $49 в год;
* наличие Русского языка;
* работа с JIRA, Confluence, Google Apps и др.

[Электронный ресурс]. – Режим доступа: https://creately.com/

1. piktochart

Это веб-приложение для создания бизнес-презентаций, инфографики и различного рода отчётов с особенным дизайном и почти без усилий. Сервис поможет в создании цепляющих материалов для маркетинга, продаж и составления годовых отчётов, для реализации концепций, презентации своих проектов, привлечения трафика и др.

Презентации создаются в виде инфографики. Достаточно только вставить текст в необходимые участки шаблонов, а система доведёт материал до конца.

Возможности Piktochart:

* 300+ профессионально разработанных тем;
* настройка текста, диаграмм, цветов;
* карты, иллюстрации и таблицы;
* сохранение, публикация в социальных сетях или загрузка в виде JPG, PNG, PDF;
* интерактивные графики;
* HTML – код для вставки на сайт (гиперссылки) и загрузка изображений;
* импорт данных из Microsoft Excel;
* базовый аккаунт на Piktochart бесплатный, а платные тарифы начинаются от $15 в месяц;
* доступные языки: English.

[Электронный ресурс]. – Режим доступа: <https://piktochart.com/>

1. Google Charts – сервис создаст красивые и легко настраиваемые графики и диаграммы из данных. Полученное отлично ляжет в основу дельной инфографики или отличной презентации.

[Электронный ресурс]. – Режим доступа: https://developers.google.com/chart/

1. Wordle – Главная задача Wordle – генерация облаков тегов из любого текста, который ему предоставляется для анализа. Ему не обязательно нужен текст. Достаточно только указать ссылку на тот сайт, текст которого необходимо проанализировать (нужно указывать RSS ленту).

[Электронный ресурс]. – Режим доступа: http://www.wordle.net/create

1. Capsidea – новая разработка от российской команды, имеющая в своем арсенале множество функций и возможностей, в том числе визуализацию потоковых данных в режиме реального времени.

Плюсы:

* Единовременная загрузка всех данных – после этого все они удобно сортируются и находятся под рукой;
* удобная функция фильтрации;
* динамика – все данные изменяются при изменении таблицы.

Минусы:

* Требует привыкания и сноровки;
* необходимость верстать все собранные данные в таблицу;
* при больших объемах данных и их разнообразии есть риск запутаться.

[Электронный ресурс]. – Режим доступа: https://slemma.com/

4.Визуализация данных по средствам таблицы.

Парадигмы

|  |
| --- |
| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Императивная**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BC.D0.BF.D0.B5.D1.80.D0.B0.D1.82.D0.B8.D0.B2.D0.BD.D0.B0.D1.8F) | + | + |
| [**Объектно-ориентированная**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9E.D0.B1.D1.8A.D0.B5.D0.BA.D1.82.D0.BD.D0.BE-.D0.BE.D1.80.D0.B8.D0.B5.D0.BD.D1.82.D0.B8.D1.80.D0.BE.D0.B2.D0.B0.D0.BD.D0.BD.D0.B0.D1.8F) | + | + |
| [**Функциональная**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A4.D1.83.D0.BD.D0.BA.D1.86.D0.B8.D0.BE.D0.BD.D0.B0.D0.BB.D1.8C.D0.BD.D0.B0.D1.8F) | -/+ | +/- |
| [**Рефлексивная**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A0.D0.B5.D1.84.D0.BB.D0.B5.D0.BA.D1.81.D0.B8.D0.B2.D0.BD.D0.B0.D1.8F) | -/+ | -/+ |
| [**Обобщённое программирование**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9E.D0.B1.D0.BE.D0.B1.D1.89.D1.91.D0.BD.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.BE.D0.B3.D1.80.D0.B0.D0.BC.D0.BC.D0.B8.D1.80.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D0.B5) | -/+ | + |
| [**Логическая**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9B.D0.BE.D0.B3.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B0.D1.8F) | - | - |
| [**Декларативная**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.94.D0.B5.D0.BA.D0.BB.D0.B0.D1.80.D0.B0.D1.82.D0.B8.D0.B2.D0.BD.D0.B0.D1.8F) | - | -/+ |
| [**Распределённая**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A0.D0.B0.D1.81.D0.BF.D1.80.D0.B5.D0.B4.D0.B5.D0.BB.D1.91.D0.BD.D0.BD.D0.B0.D1.8F) | +/- | -/+ |
|  | [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |

Типизация

|  |
| --- |
| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Статическая типизация**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A1.D1.82.D0.B0.D1.82.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B0.D1.8F_.D1.82.D0.B8.D0.BF.D0.B8.D0.B7.D0.B0.D1.86.D0.B8.D1.8F) | + | + |
| [**Динамическая типизация**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.94.D0.B8.D0.BD.D0.B0.D0.BC.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B0.D1.8F_.D1.82.D0.B8.D0.BF.D0.B8.D0.B7.D0.B0.D1.86.D0.B8.D1.8F) | - | + [[26]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-26) |
| [**Явная типизация**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.AF.D0.B2.D0.BD.D0.B0.D1.8F_.D1.82.D0.B8.D0.BF.D0.B8.D0.B7.D0.B0.D1.86.D0.B8.D1.8F) | + | + |
| [**Неявная типизация**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9D.D0.B5.D1.8F.D0.B2.D0.BD.D0.B0.D1.8F_.D1.82.D0.B8.D0.BF.D0.B8.D0.B7.D0.B0.D1.86.D0.B8.D1.8F) | -/+ | -/+[[36]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-36) |
| [**Неявное приведение типов без потери данных**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9D.D0.B5.D1.8F.D0.B2.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.B8.D0.B2.D0.B5.D0.B4.D0.B5.D0.BD.D0.B8.D0.B5_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2_.D0.B1.D0.B5.D0.B7_.D0.BF.D0.BE.D1.82.D0.B5.D1.80.D0.B8_.D0.B4.D0.B0.D0.BD.D0.BD.D1.8B.D1.85) | + | + |
| [**Неявное приведение типов с потерей данных**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9D.D0.B5.D1.8F.D0.B2.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.B8.D0.B2.D0.B5.D0.B4.D0.B5.D0.BD.D0.B8.D0.B5_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2_.D1.81_.D0.BF.D0.BE.D1.82.D0.B5.D1.80.D0.B5.D0.B9_.D0.B4.D0.B0.D0.BD.D0.BD.D1.8B.D1.85) | + | - |
| [**Неявное приведение типов в неоднозначных ситуациях**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9D.D0.B5.D1.8F.D0.B2.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.B8.D0.B2.D0.B5.D0.B4.D0.B5.D0.BD.D0.B8.D0.B5_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2_.D0.B2_.D0.BD.D0.B5.D0.BE.D0.B4.D0.BD.D0.BE.D0.B7.D0.BD.D0.B0.D1.87.D0.BD.D1.8B.D1.85_.D1.81.D0.B8.D1.82.D1.83.D0.B0.D1.) | + | + |
| [**Алиасы типов**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.90.D0.BB.D0.B8.D0.B0.D1.81.D1.8B_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2) | + | + |
| [**Вывод типов переменных из инициализатора**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.92.D1.8B.D0.B2.D0.BE.D0.B4_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2_.D0.BF.D0.B5.D1.80.D0.B5.D0.BC.D0.B5.D0.BD.D0.BD.D1.8B.D1.85_.D0.B8.D0.B7_.D0.B8.D0.BD.D0.B8.D1.86.D0.B8.D0.B0.D0.BB.D0.B8.D0.B7.D0.B0.D1.82.D0.BE.D1.80.D0.B0) | +/- [[44]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-cpp-type-inference-44) | + |
| [**Вывод типов переменных из использования**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.92.D1.8B.D0.B2.D0.BE.D0.B4_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2_.D0.BF.D0.B5.D1.80.D0.B5.D0.BC.D0.B5.D0.BD.D0.BD.D1.8B.D1.85_.D0.B8.D0.B7_.D0.B8.D1.81.D0.BF.D0.BE.D0.BB.D1.8C.D0.B7.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D1.8F) | +/- [[44]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-cpp-type-inference-44) | - |
| [**Вывод типов-аргументов при вызове метода**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.92.D1.8B.D0.B2.D0.BE.D0.B4_.D1.82.D0.B8.D0.BF.D0.BE.D0.B2-.D0.B0.D1.80.D0.B3.D1.83.D0.BC.D0.B5.D0.BD.D1.82.D0.BE.D0.B2_.D0.BF.D1.80.D0.B8_.D0.B2.D1.8B.D0.B7.D0.BE.D0.B2.D0.B5_.D0.BC.D0.B5.D1.82.D0.BE.D0.B4.D0.B0) | + | + |
| [**Вывод сигнатуры для локальных функций**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.92.D1.8B.D0.B2.D0.BE.D0.B4_.D1.81.D0.B8.D0.B3.D0.BD.D0.B0.D1.82.D1.83.D1.80.D1.8B_.D0.B4.D0.BB.D1.8F_.D0.BB.D0.BE.D0.BA.D0.B0.D0.BB.D1.8C.D0.BD.D1.8B.D1.85_.D1.84.D1.83.D0.BD.D0.BA.D1.86.D0.B8.D0.B9) | +/- [[46]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-46) | - |
| [**Параметрический полиморфизм**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B9_.D0.BF.D0.BE.D0.BB.D0.B8.D0.BC.D0.BE.D1.80.D1.84.D0.B8.D0.B7.D0.BC) | - | + |
| [**Параметрический полиморфизм с ковариантностью**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B9_.D0.BF.D0.BE.D0.BB.D0.B8.D0.BC.D0.BE.D1.80.D1.84.D0.B8.D0.B7.D0.BC_.D1.81_.D0.BA.D0.BE.D0.B2.D0.B0.D1.80.D0.B8.D0.B0.D0.BD.D1.82.D0.BD.D0.BE.D1.81.D1.82.D1.8C.D1.8E) | - | +/- [[47]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-47) |
| [**Параметрический полиморфизм высших порядков**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B9_.D0.BF.D0.BE.D0.BB.D0.B8.D0.BC.D0.BE.D1.80.D1.84.D0.B8.D0.B7.D0.BC_.D0.B2.D1.8B.D1.81.D1.88.D0.B8.D1.85_.D0.BF.D0.BE.D1.80.D1.8F.D0.B4.D0.BA.D0.BE.D0.B2) | - | - |
| [**Информация о типах в runtime**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.84.D0.BE.D1.80.D0.BC.D0.B0.D1.86.D0.B8.D1.8F_.D0.BE_.D1.82.D0.B8.D0.BF.D0.B0.D1.85_.D0.B2_runtime) | -/+ [[50]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-50) | + |
| [**Информация о типах-параметрах в runtime**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.84.D0.BE.D1.80.D0.BC.D0.B0.D1.86.D0.B8.D1.8F_.D0.BE_.D1.82.D0.B8.D0.BF.D0.B0.D1.85-.D0.BF.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D0.B0.D1.85_.D0.B2_runtime) | -/+ | + |
|  | [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |

Компилятор/интерпретатор

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Open-source компилятор (интерпретатор)**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#Open-source_.D0.BA.D0.BE.D0.BC.D0.BF.D0.B8.D0.BB.D1.8F.D1.82.D0.BE.D1.80_.28.D0.B8.D0.BD.D1.82.D0.B5.D1.80.D0.BF.D1.80.D0.B5.D1.82.D0.B0.D1.82.D0.BE.D1.80.29) | + | + |
| [**Возможность компиляции**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.92.D0.BE.D0.B7.D0.BC.D0.BE.D0.B6.D0.BD.D0.BE.D1.81.D1.82.D1.8C_.D0.BA.D0.BE.D0.BC.D0.BF.D0.B8.D0.BB.D1.8F.D1.86.D0.B8.D0.B8) | + | + |
| [**Bootstrapping**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#Bootstrapping) | + | + |
| [**Многопоточная компиляция**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9C.D0.BD.D0.BE.D0.B3.D0.BE.D0.BF.D0.BE.D1.82.D0.BE.D1.87.D0.BD.D0.B0.D1.8F_.D0.BA.D0.BE.D0.BC.D0.BF.D0.B8.D0.BB.D1.8F.D1.86.D0.B8.D1.8F) | + | - |
| [**Интерпретатор командной строки**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.82.D0.B5.D1.80.D0.BF.D1.80.D0.B5.D1.82.D0.B0.D1.82.D0.BE.D1.80_.D0.BA.D0.BE.D0.BC.D0.B0.D0.BD.D0.B4.D0.BD.D0.BE.D0.B9_.D1.81.D1.82.D1.80.D0.BE.D0.BA.D0.B8) | +/- | + |
| [**Условная компиляция**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A3.D1.81.D0.BB.D0.BE.D0.B2.D0.BD.D0.B0.D1.8F_.D0.BA.D0.BE.D0.BC.D0.BF.D0.B8.D0.BB.D1.8F.D1.86.D0.B8.D1.8F) | + | + |
|  | [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |

Управление памятью

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Создание объектов на стеке**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9E.D0.B1.D1.8A.D0.B5.D0.BA.D1.82.D1.8B_.D0.BD.D0.B0_.D1.81.D1.82.D0.B5.D0.BA.D0.B5) | + | + |
| [**Неуправляемые указатели**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9D.D0.B5.D1.83.D0.BF.D1.80.D0.B0.D0.B2.D0.BB.D1.8F.D0.B5.D0.BC.D1.8B.D0.B5_.D1.83.D0.BA.D0.B0.D0.B7.D0.B0.D1.82.D0.B5.D0.BB.D0.B8) | + | + |
| [**Ручное управление памятью**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A0.D1.83.D1.87.D0.BD.D0.BE.D0.B5_.D1.83.D0.BF.D1.80.D0.B0.D0.B2.D0.BB.D0.B5.D0.BD.D0.B8.D0.B5_.D0.BF.D0.B0.D0.BC.D1.8F.D1.82.D1.8C.D1.8E) | + | + |
| [**Сборка мусора**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A1.D0.B1.D0.BE.D1.80.D0.BA.D0.B0_.D0.BC.D1.83.D1.81.D0.BE.D1.80.D0.B0) | -/+ | + |

Управление потоком вычислений

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| **Возможность** |
| [**Active Oberon**](https://cyclowiki.org/w/index.php?title=%D0%90%D0%BA%D1%82%D0%B8%D0%B2%D0%BD%D1%8B%D0%B9_%D0%9E%D0%B1%D0%B5%D1%80%D0%BE%D0%BD&action=edit&redlink=1) | [**Ada**](https://cyclowiki.org/w/index.php?title=%D0%90%D0%B4%D0%B0_(%D1%8F%D0%B7%D1%8B%D0%BA_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F)&action=edit&redlink=1) | [**C**](https://cyclowiki.org/w/index.php?title=%D0%A1%D0%B8_(%D1%8F%D0%B7%D1%8B%D0%BA_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F)&action=edit&redlink=1) | [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Инструкция goto**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.81.D1.82.D1.80.D1.83.D0.BA.D1.86.D0.B8.D1.8F_goto) | - | + | + | + | + |
| [**Инструкции break без метки**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.81.D1.82.D1.80.D1.83.D0.BA.D1.86.D0.B8.D1.8F_break_.D0.B1.D0.B5.D0.B7_.D0.BC.D0.B5.D1.82.D0.BA.D0.B8) | + | + | + | + | + |
| [**Инструкция break с меткой**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.81.D1.82.D1.80.D1.83.D0.BA.D1.86.D0.B8.D1.8F_break_.D1.81_.D0.BC.D0.B5.D1.82.D0.BA.D0.BE.D0.B9) | - | + | - | - | - |
| [**Поддержка try/catch**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.BE.D0.B4.D0.B4.D0.B5.D1.80.D0.B6.D0.BA.D0.B0_try.2Fcatch) | - | + | - | + | + |
| [**Блок finally**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.91.D0.BB.D0.BE.D0.BA_finally) | + | -/+ [[105]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-ada-finally-105) | - | - | + |
| [**Блок else (исключения)**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.91.D0.BB.D0.BE.D0.BA_else_.28.D0.B8.D1.81.D0.BA.D0.BB.D1.8E.D1.87.D0.B5.D0.BD.D0.B8.D1.8F.29) | - | - | - | - | - |
| [**Перезапуски**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B5.D1.80.D0.B5.D0.B7.D0.B0.D0.BF.D1.83.D1.81.D0.BA.D0.B8) | +[[113]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-activeoberon-resumable-exceptions-113) | ? | - | ? | - |
| [**Ленивые вычисления**](https://cyclowiki.org/w/index.php?title=%D0%9B%D0%B5%D0%BD%D0%B8%D0%B2%D1%8B%D0%B5_%D0%B2%D1%8B%D1%87%D0%B8%D1%81%D0%BB%D0%B5%D0%BD%D0%B8%D1%8F&action=edit&redlink=1) | - | ? | - | -/+ | -/+ [[116]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-csharp-lazy-116) |
| [**Continuations**](https://cyclowiki.org/w/index.php?title=Continuations&action=edit&redlink=1) | - | ? | -/+[[124]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-124) | ? | +[[125]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-125) |
| [**Легковесные процессы (Coroutines)**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9B.D0.B5.D0.B3.D0.BA.D0.BE.D0.B2.D0.B5.D1.81.D0.BD.D1.8B.D0.B5_.D0.BF.D1.80.D0.BE.D1.86.D0.B5.D1.81.D1.81.D1.8B) | + | - | - | - | - |

Типы и структуры данных

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Кортежи**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9A.D0.BE.D1.80.D1.82.D0.B5.D0.B6.D0.B8) | +/- | + |
| [**Алгебраические типы данных**](https://cyclowiki.org/w/index.php?title=%D0%90%D0%BB%D0%B3%D0%B5%D0%B1%D1%80%D0%B0%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%B8%D0%B9_%D1%82%D0%B8%D0%BF_%D0%B4%D0%B0%D0%BD%D0%BD%D1%8B%D1%85&action=edit&redlink=1) | - | - |
| [**Многомерные массивы**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9C.D0.BD.D0.BE.D0.B3.D0.BE.D0.BC.D0.B5.D1.80.D0.BD.D1.8B.D0.B5_.D0.BC.D0.B0.D1.81.D1.81.D0.B8.D0.B2.D1.8B) | + | + |
| [**Динамические массивы**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.94.D0.B8.D0.BD.D0.B0.D0.BC.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B5_.D0.BC.D0.B0.D1.81.D1.81.D0.B8.D0.B2.D1.8B) | + | +/- |
| [**Ассоциативные массивы**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.90.D1.81.D1.81.D0.BE.D1.86.D0.B8.D0.B0.D1.82.D0.B8.D0.B2.D0.BD.D1.8B.D0.B5_.D0.BC.D0.B0.D1.81.D1.81.D0.B8.D0.B2.D1.8B) | + [[145]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-145) | + |
| [**Контроль границ массивов**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9A.D0.BE.D0.BD.D1.82.D1.80.D0.BE.D0.BB.D1.8C_.D0.B3.D1.80.D0.B0.D0.BD.D0.B8.D1.86_.D0.BC.D0.B0.D1.81.D1.81.D0.B8.D0.B2.D0.BE.D0.B2) | +/- [[149]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-149) | + |
| [**Цикл foreach**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A6.D0.B8.D0.BA.D0.BB_foreach) | + [[154]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-.D0.A1.2B.2B-foreach-154) | + |
| [**Списковые включения**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#List_comprehensions) | - | -/+ [[158]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-158) |
| [**Целые числа произвольной длины**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A6.D0.B5.D0.BB.D1.8B.D0.B5_.D1.87.D0.B8.D1.81.D0.BB.D0.B0_.D0.BF.D1.80.D0.BE.D0.B8.D0.B7.D0.B2.D0.BE.D0.BB.D1.8C.D0.BD.D0.BE.D0.B9_.D0.B4.D0.BB.D0.B8.D0.BD.D1.8B) | - | + [[160]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-dotnet-bignum-160) |
| [**Целые числа с контролем границ**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A6.D0.B5.D0.BB.D1.8B.D0.B5_.D1.87.D0.B8.D1.81.D0.BB.D0.B0_.D1.81_.D0.BA.D0.BE.D0.BD.D1.82.D1.80.D0.BE.D0.BB.D0.B5.D0.BC_.D0.B3.D1.80.D0.B0.D0.BD.D0.B8.D1.86) | - | - |

Объектно-ориентированные возможности

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Интерфейсы**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BD.D1.82.D0.B5.D1.80.D1.84.D0.B5.D0.B9.D1.81.D1.8B) | + [[170]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-170) | + |
| [**Мультиметоды**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9C.D1.83.D0.BB.D1.8C.D1.82.D0.B8.D0.BC.D0.B5.D1.82.D0.BE.D0.B4.D1.8B) | -/+[[174]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-174) | -/+[[175]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-175) |
| [**Mixins**](https://cyclowiki.org/w/index.php?title=%D0%9F%D1%80%D0%B8%D0%BC%D0%B5%D1%81%D1%8C_(%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D0%B5)&action=edit&redlink=1) | -/+[[179]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-179) | - |
| [**Переименование членов при наследовании**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B5.D1.80.D0.B5.D0.B8.D0.BC.D0.B5.D0.BD.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D0.B5_.D1.87.D0.BB.D0.B5.D0.BD.D0.BE.D0.B2_.D0.BF.D1.80.D0.B8_.D0.BD.D0.B0.D1.81.D0.BB.D0.B5.D0.B4.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D0.B8) | -/+[[184]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-184) | - |
| [**Множественное наследование**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9C.D0.BD.D0.BE.D0.B6.D0.B5.D1.81.D1.82.D0.B2.D0.B5.D0.BD.D0.BD.D0.BE.D0.B5_.D0.BD.D0.B0.D1.81.D0.BB.D0.B5.D0.B4.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D0.B5) | + | - |
| [**Решение конфликта имён при множественном наследовании**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A0.D0.B5.D1.88.D0.B5.D0.BD.D0.B8.D0.B5_.D0.BA.D0.BE.D0.BD.D1.84.D0.BB.D0.B8.D0.BA.D1.82.D0.B0_.D0.B8.D0.BC.D1.91.D0.BD_.D0.BF.D1.80.D0.B8_.D0.BC.D0.BD.D0.BE.D0.B6.D0.B5.D1.81.D1.82.D0.B2.D0.B5.D0.BD.D0.BD.D0.BE.D0.BC_.D0.BD.D0.B0.D1.81.D0.BB.D0.B5.D0.) | + [[186]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-cpp-dual-inherit-186) | N/A |

Функциональные возможности

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Декларации чистоты функций**](https://cyclowiki.org/w/index.php?title=%D0%A7%D0%B8%D1%81%D1%82%D0%BE%D1%82%D0%B0_%D1%84%D1%83%D0%BD%D0%BA%D1%86%D0%B8%D0%B8&action=edit&redlink=1) | -/+ | - |
| [**First class functions**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#First_class_functions) | + | + |
| [**Анонимные функции**](https://cyclowiki.org/w/index.php?title=%D0%90%D0%BD%D0%BE%D0%BD%D0%B8%D0%BC%D0%BD%D1%8B%D0%B5_%D1%84%D1%83%D0%BD%D0%BA%D1%86%D0%B8%D0%B8&action=edit&redlink=1) | + | + |
| [**Лексические замыкания**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9B.D0.B5.D0.BA.D1.81.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B5_.D0.B7.D0.B0.D0.BC.D1.8B.D0.BA.D0.B0.D0.BD.D0.B8.D1.8F) | + | + |
| [**Частичное применение**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A7.D0.B0.D1.81.D1.82.D0.B8.D1.87.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.B8.D0.BC.D0.B5.D0.BD.D0.B5.D0.BD.D0.B8.D0.B5) | +/- | ? |
| [**Каррирование**](https://cyclowiki.org/w/index.php?title=%D0%9A%D0%B0%D1%80%D1%80%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D0%B5&action=edit&redlink=1) | +/- | + |

Разное

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| **Возможность** |
| [**C++**](https://cyclowiki.org/w/index.php?title=C%2B%2B&action=edit&redlink=1) | [**C#**](https://cyclowiki.org/w/index.php?title=CSharp&action=edit&redlink=1) |
| [**Макросы**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9C.D0.B0.D0.BA.D1.80.D0.BE.D1.81.D1.8B) | + [[212]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-autogenerated2-212) | +/- |
| [**Шаблоны/Generics**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A8.D0.B0.D0.B1.D0.BB.D0.BE.D0.BD.D1.8B.2FGenerics) | + | + |
| [**Поддержка Unicode в идентификаторах**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.BE.D0.B4.D0.B4.D0.B5.D1.80.D0.B6.D0.BA.D0.B0_Unicode_.D0.B2_.D0.B8.D0.B4.D0.B5.D0.BD.D1.82.D0.B8.D1.84.D0.B8.D0.BA.D0.B0.D1.82.D0.BE.D1.80.D0.B0.D1.85) | + [[221]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-221) | + |
| [**Перегрузка функций**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9F.D0.B5.D1.80.D0.B5.D0.B3.D1.80.D1.83.D0.B7.D0.BA.D0.B0_.D1.84.D1.83.D0.BD.D0.BA.D1.86.D0.B8.D0.B9) | + | + |
| [**Динамические переменные**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.94.D0.B8.D0.BD.D0.B0.D0.BC.D0.B8.D1.87.D0.B5.D1.81.D0.BA.D0.B8.D0.B5_.D0.BF.D0.B5.D1.80.D0.B5.D0.BC.D0.B5.D0.BD.D0.BD.D1.8B.D0.B5) | - | + |
| [**Именованные параметры**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.98.D0.BC.D0.B5.D0.BD.D0.BE.D0.B2.D0.B0.D0.BD.D0.BD.D1.8B.D0.B5_.D0.BF.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D1.8B) | - | + [[232]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-charp_args-232) |
| [**Значения параметров по умолчанию**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.97.D0.BD.D0.B0.D1.87.D0.B5.D0.BD.D0.B8.D1.8F_.D0.BF.D0.B0.D1.80.D0.B0.D0.BC.D0.B5.D1.82.D1.80.D0.BE.D0.B2_.D0.BF.D0.BE_.D1.83.D0.BC.D0.BE.D0.BB.D1.87.D0.B0.D0.BD.D0.B8.D1.8E) | + | + [[232]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-charp_args-232) |
| [**Локальные функции**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9B.D0.BE.D0.BA.D0.B0.D0.BB.D1.8C.D0.BD.D1.8B.D0.B5_.D1.84.D1.83.D0.BD.D0.BA.D1.86.D0.B8.D0.B8) | + [[241]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-241) | + |
| [**Сопоставление с образцом**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.A1.D0.BE.D0.BF.D0.BE.D1.81.D1.82.D0.B0.D0.B2.D0.BB.D0.B5.D0.BD.D0.B8.D0.B5_.D1.81_.D0.BE.D0.B1.D1.80.D0.B0.D0.B7.D1.86.D0.BE.D0.BC) | - | + |
| [**Контрактное программирование**](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#.D0.9A.D0.BE.D0.BD.D1.82.D1.80.D0.B0.D0.BA.D1.82.D0.BD.D0.BE.D0.B5_.D0.BF.D1.80.D0.BE.D0.B3.D1.80.D0.B0.D0.BC.D0.BC.D0.B8.D1.80.D0.BE.D0.B2.D0.B0.D0.BD.D0.B8.D0.B5) | - | + [[246]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-dotnet-contract-246) |
| **Наличие библиотек для работы с графикой и мультимедиа ([OpenGL](https://cyclowiki.org/w/index.php?title=OpenGL&action=edit&redlink=1" \o "OpenGL (страница не существует))/[WebGL](https://cyclowiki.org/w/index.php?title=WebGL&action=edit&redlink=1" \o "WebGL (страница не существует))/[OpenML](https://cyclowiki.org/w/index.php?title=OpenML&action=edit&redlink=1" \o "OpenML (страница не существует)), [OpenAL](https://cyclowiki.org/w/index.php?title=OpenAL&action=edit&redlink=1" \o "OpenAL (страница не существует)), [DirectX](https://cyclowiki.org/w/index.php?title=DirectX&action=edit&redlink=1" \o "DirectX (страница не существует)))** | + | +[[249]](https://cyclowiki.org/wiki/%D0%A1%D1%80%D0%B0%D0%B2%D0%BD%D0%B5%D0%BD%D0%B8%D0%B5_%D1%8F%D0%B7%D1%8B%D0%BA%D0%BE%D0%B2_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B8%D1%80%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F#cite_note-autogenerated5-249) |







