

Oracle[®] Unified Method (OUM)
*Oracle's Full Lifecycle Method for
Deploying Oracle-based Business
Solutions*

*An Oracle White Paper
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Oracle Unified Method (OUM) White Paper

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OUM supports Oracle-based business solutions including:

- Service-Oriented Architecture (SOA)
- Enterprise Integration
- Custom Software
- Identity Management (IdM)
- Database Security (DBS)
- Governance, Risk, & Compliance (GRC)
- Performance Management
- Business Intelligence and Analytics
- Enterprise 2.0
- Enterprise Application Implementation

Reference: *The Unified Software Development Process* by Ivar Jacobson, Grady Booch, and James Rumbaugh and *UML Distilled* by Fowler and Scott

EXECUTIVE OVERVIEW

The Oracle® Unified Method (OUM) is Oracle's standards-based method that enables the entire Enterprise Information Technology (IT) lifecycle. OUM provides an implementation approach that is rapid, broadly adaptive, and business-focused. OUM includes a comprehensive project and program management framework and materials to support Oracle's growing focus on enterprise-level IT strategy, architecture, and governance.

Oracle's Global Methods team has packaged OUM to accelerate your IT projects. OUM presents an organized, yet flexible, approach. Its defined, operational framework helps anticipate critical project needs and dependencies. With OUM, you can move efficiently through the IT lifecycle to quickly achieve measurable business results.

INTRODUCTION

Standards Based

OUM leverages one of the de facto industry standards, Unified Software Development Process (UP). UP is an iterative and incremental approach to developing and implementing software systems. Project managers use UP's four-step approach (inception, elaboration, construction, and transition) to make sure they and their stakeholders develop a shared understanding of what is needed, choose an appropriate architecture, and transfer the ownership of the end-product to the stakeholders. OUM tailors and extends the Unified Process to support the full scope of Oracle-related projects by incorporating field experience and intellectual capital contributed by Oracle practitioners.

Iterative and Incremental

OUM recognizes the advantages of an iterative and incremental approach to development and deployment of information systems. Any of the tasks within OUM may be iterated. Whether or not to iterate, as well as the number of iterations, varies. Tasks may be iterated to increase quality of the work products to a desired level, to add sufficient level of detail, or to refine and expand the work products on the basis of user feedback.

References: Agile Manifesto - <http://www.agilemanifesto.org> and *Balancing Agility and Discipline: A Guide for the Perplexed* by Barry Boehm and Richard Turner

Supports Both Agility and Discipline

OUM is designed to support a broad range of project types. As such, it must be scalable and adaptable. The appropriate point of balance for a given project will vary based on a number of project risk and scale factors. The method has been developed with the intent that the approach for a given project be “built up” from a core set of activities to implement an appropriate level of discipline, rather than tailored down.

BENEFITS OF OUM

- **More Focused Effort** – OUM enables projects to clearly define business scope and needs to create enterprise business process models. This planning results in tighter scope control, more accurate business understanding, and a firm foundation for client acceptance.
- **Built-in Flexibility** – By combining activities and tasks in different ways, OUM can be applied to many types of information technology software development and implementation projects.
- **Saves Time** – Seasoned information technology practitioners representing years of experience have contributed their knowledge to OUM. Project teams to take advantage of this experience by leveraging these leading practices along with industry standards.
- **Higher Quality** – OUM subscribes to an iterative approach that incorporates testing and validation throughout the lifecycle, rather than testing for quality only at the end of the project.
- **More Cost Effective** – OUM facilitates improved control of project expenses by using a flexible work breakdown structure that allows you to perform only necessary tasks.
- **Reduced Project Risk** – Implementing an iterative, broadly applicable method mitigates requirements mismatch. A key focus of each iteration in OUM is to identify and reduce the most significant project risks. This ensures that the most critical risks are addressed as early as possible in the project lifecycle, which results in a measurable reduction of schedule and budget risks.

KEY FEATURES OF OUM

OUM was developed with the following key features:

- Flexible
- Scalable
- Pre-defined Views

Flexible

OUM is flexible because it allows your organization to select the strategy, techniques, and tasks appropriate for your project. OUM provides specific guidelines for tailoring your project plan to fit your situation - from the most basic development to changes in the underlying technical architecture. By combining activities and tasks in different ways, OUM can be applied to many types of information technology software development and implementation projects.

Scalable

OUM was designed with scalability in mind. From the largest, multi-national, multi-site, multi-entity projects, through to the smallest, limited size, constrained scope projects—OUM provides the scalability required by each unique project. Guidelines aid in determining which tasks to include in the project plan. This greatly reduces the complexity for the project management team in planning the work effort required.

Pre-defined Views

The method material is organized into pre-defined Views. Views provide an initial tailoring of the workplan specific to a focus area, discipline, or service offering. Each view page provides access to guidance and a tailored work breakdown structure.

OUM 5.2 provides the following pre-defined views:

- Full Method Views
 - Full Method
 - Full Method Activities and Tasks
- Focus Area Views – provide a framework for managing, enterprise level planning, as well as developing and implementing business solutions
 - Manage
 - Envision
 - Implement
 - Implement Core Workflow
 - Implement Models

OUM provides several types of pre-defined views: Full Method, Focus Area, Discipline, and Service Offering.

- Discipline Views – a grouping of OUM material appropriate for the engagement types provided by a specific professional community
 - Application Implementation (Solution-Driven and Requirements-Driven)
 - Business Intelligence and Analytics Custom Development
 - Enterprise Architecture Delivery Framework (EADF)
 - Enterprise and Solution Architecture
 - Insight
 - Service Engineering
 - Strategy
 - Technology Full Lifecycle
 - The Open Group Architecture Framework (TOGAF)
- Service Offering Views – a grouping of OUM material appropriate for implementing a specific solution
 - Business to Business Integration
 - Enterprise 2.0
 - Enterprise Optimization Roadmap
 - Middleware Architecture
 - Portal Implementation
 - Service-Oriented Architecture (SOA) Engineering Planning
 - Service-Oriented Architecture (SOA) Modeling Planning
 - Systems Integration
 - Systems and Software Architecture

IMPLEMENTING AN OUM PROJECT

The Implement focus area provides a framework to develop and implement Oracle-based business solutions. OUM uses project phases and processes to include quality and control checkpoints and allow coordination of project activities throughout the project. During a project phase, the project team executes tasks in several processes.

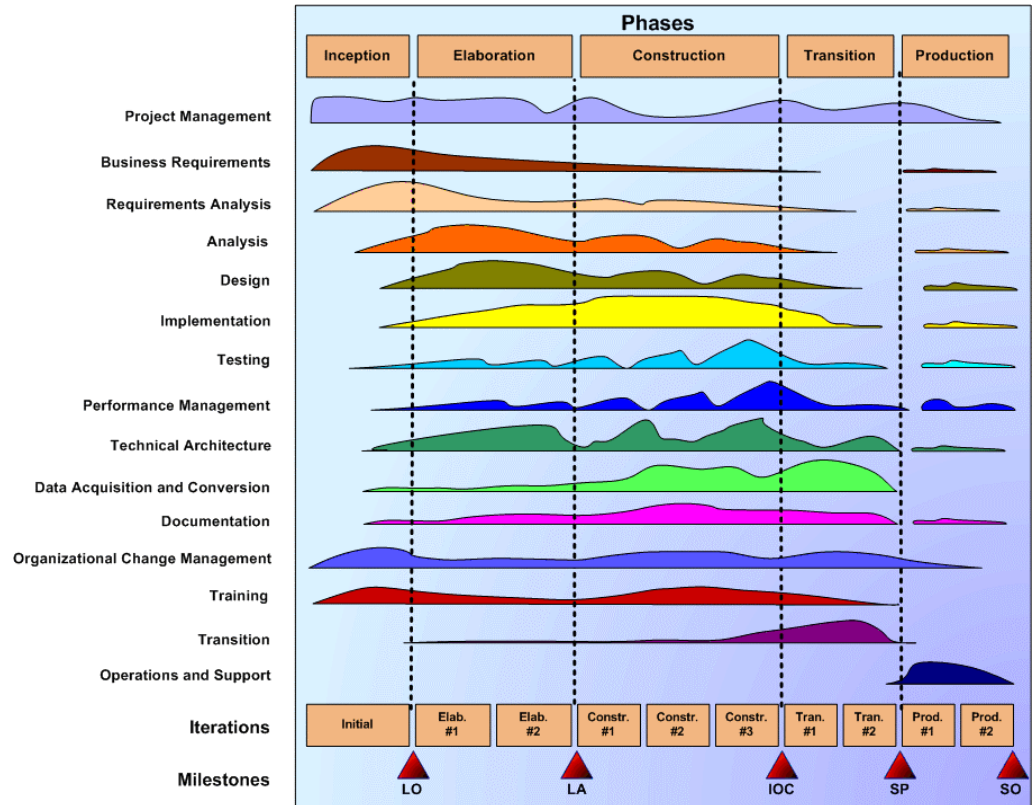


Figure 1 - OUM Implement Focus Area

Phase - A chronological grouping of tasks in an approach. Engagements are delivered by phase in order to reduce project risk. Each phase allows a checkpoint against project goals and measurement against quality criteria.

Project Phases for Control

OUM includes the following phases.

Inception

The overriding goal of the Inception phase is to achieve concurrence among all stakeholders on the lifecycle objectives for the project. This activity is most significant for new development efforts, in which important business and requirements risks must be addressed before the project can proceed. The Inception phase is used to kick off a solution development engagement; review the strategic direction of the client's business; and confirm, document, and prioritize the high-level business requirements for the implementation. It is also the time to begin assembling and integrating the project team, to scope the entire engagement, and develop the initial project plan.

Elaboration

The goal of the Elaboration phase is to develop the detailed requirements models, partition the solution, develop functional prototyping, and baseline the architecture of the system. This effort results in a stable basis for the design and implementation effort in the Construction phase. The architecture evolves from the most significant requirements, those that have the greatest impact on the architecture of the system, and an assessment of risk. The stability of the architecture is evaluated through one or more architectural prototypes. During the Elaboration phase, the development team's understanding of the client's business requirements is verified to reduce development risk.

Construction

The goal of the Construction phase is develop, test and integrate the components of the solution. This effort results in a first release, often called a beta release, of the solution. An iterative process is used to refine the data, detail the use cases, and develop the physical database and components. This process is repeated, within the constraints of the project timeboxes and priorities, until the business requirements are met.

Transition

The goal of the Transition phase is to install the solution onto the production system, perform acceptance testing, and launch the live application. During this phase, the new system is accepted by the client organization, the organization is made ready for the new system, and the system is put into production. If the new system replaces an old one, a smooth cutover to the new application is provided. The Transition phase can span several iterations and includes testing the product in preparation for release and making minor adjustments based on user feedback.

Production

The goal of the Production phase is to operate the newly developed system, assess the success of the system, and support the users. This includes: monitoring the system; acting appropriately to ensure continued operation; measuring system performance; operating and maintaining supporting systems; responding to help requests, error reports and feature requests by users; and managing the applicable change control process so that defects and new features are prioritized and assigned to future releases.

Process - A discipline or sub-project that defines a set of tasks related by subject matter, required skills, and common dependencies. A process usually spans several phases in an approach.

Project Processes for Continuity

All OUM tasks are also organized into processes that group related tasks together. Project team members are assigned to these groupings according to their specialization and background. OUM includes the following processes.

Business Requirements

In the Business Requirements process, the business requirements for the proposed system or new enhancements are identified, refined, and prioritized by a tightly integrated team of empowered ambassador users and experienced analysts. The process often begins from existing high-level requirements and scope documents; however, it is possible to begin from an agreed on scope and objectives if the requirements have not yet been defined. The main work products from this process are the business objectives and goals and the list of functional and non-functional requirements.

Requirements Analysis

In the Requirements Analysis process, the functional and supplemental requirements are analyzed further into a Use Case Model. The process of creating use cases helps ensure that the models and the associated system processes satisfy the business requirements. The Use Case Model is used to document, in detail, the requirements of the system in a format that both the client and the developers of the system can easily understand. The main work products of this process are the Use Case Model, a prototype of the user interface, and a high-level description of the software architecture.

Analysis

During the Analysis process, the captured requirements are analyzed and mapped onto the chosen commercial-off-the-shelf (COTS) product set, if any, to ascertain which requirements can be met directly by configuring the product's capabilities and which requirements will require extending the product capabilities through the development of custom application software or custom extensions. Beyond product mapping, the purpose of Analysis is to refine and structure the requirements via a conceptual object model, called the Analysis Model. Most simply put, the Analysis Model is the collection of all of the analysis related artifacts, just as the Use Case Model documents the system's functional requirements. The main work product of the Analysis process is the Reviewed Analysis Model that includes a set of analysis classes (class diagrams) that realize the use cases.

Design

In the Design process, the system is shaped and formed to meet all functional and supplemental requirements. This form is based on the architecture created and stabilized during the Analysis process. Design is the focus during the end of

Elaboration phase and the beginning of Construction iterations. The major work products created in this process ultimately combine to form the Design Model that is used during the Implementation process. The Design Model can be used to visualize the implementation of the system. The main work product of this process is the Reviewed Design Model that includes an object model that describes the design realization of the use cases and design classes that detail the analysis classes outlined in the Analysis Model.

Implementation

Through a number of steps, mostly iterative, the final application is developed within the Implementation process. The results from the Design process are used to implement the system such as source code for components, scripts, and executables. During this process, developers also perform testing on software components. Implementation is the main focus of the Construction phase, but it starts early in the Elaboration phase in order to implement the architecture baseline (trial architecture and prototype). During Transition, it occurs in order to handle any defects or bugs discovered while testing and releasing the system. The main work product of this process is the final iteration build that is ready to be tested.

Testing

The Testing process is an integrated approach to testing the quality and conformance of all elements of the new system. Therefore, it is closely related to the review tasks in the Quality Management process of Oracle's Project Management Method (part of the OUM's Manage focus area) and to the definition and refinement of requirements in the Business Requirements process. It addresses mainly functional testing; however, it also includes systems integration testing for projects with requirements for interfaces to external systems.

Testing activities are a shared responsibility of developers, quality assurance engineers, and ambassador users, working together as an integrated project team. The Testing process presupposes that there is a highly visible user interface from which system events can be driven and results validated. The higher proportion of artifacts that are visible to the ambassador users (for example, user interfaces and reports) the more they will be able to participate in the Testing process.

Performance Management

The objective of the Performance Management process is to proactively define, construct, and execute an effective approach to managing performance throughout the project implementation lifecycle. This helps to ensure that the performance of the system or system components meet the user's requirements and expectations when the system is implemented. Performance Management is not limited to conducting a performance test or an isolated tuning exercise, although both those activities may be part of the overall Performance Management strategy. The requirements that drive Performance Management also impact Technical Architecture and the two processes are closely related.

Technical Architecture

The goal of the Technical Architecture process is to design an information systems architecture to support and realize the business vision. The tasks in the Technical Architecture process identify and document the requirements related to the establishment and maintenance of the application and technical infrastructure environment for the project. Processes and procedures required to implement, monitor and maintain the various environments are established and tested.

Data Acquisition and Conversion

The objective of the Data Acquisition and Conversion process is to create the components necessary to extract, transform, transport, and load the legacy source data to support the information needs of the new system. The data that will be converted is explicitly defined, along with its sources. This data may be needed for system testing, training, and acceptance testing as well as for production. In some cases, it is beneficial to convert (some) data at earlier stages to provide as realistic as possible reviews of the components during the development iterations.

Documentation

Quality documentation is a key factor in supporting the transition to production, achieving user acceptance, and maintaining the ongoing business process. The requirements and strategy for this process vary based on project scope, technology, and requirements. For projects that include Oracle Application products, the Oracle Application manuals are the foundation of implementation documentation. The Documentation process includes development of documentation to augment the standard Oracle Application products manuals with specific information about the organization's custom software extensions and specific business procedures.

Organizational Change Management

The Organizational Change Management process starts at the strategic level with executives and then identifies the particular human and organizational challenges of the technology implementation in order to design a systematic, time-sensitive, and cost-effective approach to lowering risk that is tailored to each organization's specific needs. In addition to increasing user adoption rates, carefully planning for and managing change in this way allows organization's to maintain productivity through often-difficult technological transitions. This in turn enables the organization to more easily meet deadlines, realize business objectives, and maximize return on investment.

Training

The objectives of the Training process are to make sure that the project team is adequately trained to begin the tasks necessary to start the project and the users are adequately trained to take on the tasks of running the new application system.

Transition

The goal of the Transition process is to install the solution, which includes providing installation procedures, and then take it into production. This process begins early in the project by defining the specific requirements for cutover to the new application system. It then includes tasks to carry out the elements of that strategy such as developing an installation plan, preparing the production environment, performing the cutover, and decommissioning any legacy systems.

Operations and Support

The goals of the Operations and Support process are to monitor and respond to system problems; upgrade the application to fix errors and performance problems; evaluate the system in production; and plan enhancements for increased functionality, improved performance, and tighter security. The development project does not come to an abrupt end when the team installs the application system into production. In fact, the months following that milestone can determine the real success or failure of the project. Internal auditors have not yet produced the system evaluation, and users most likely still have a few problems to uncover. There are certain to be requirements with lower priorities that have not been implemented. The 'could have' requirements and any remaining 'should have' can now be re-prioritized into an enhancement plan, from which upgrades can be defined.

Activity - A grouping of related tasks within a phase that result in the completion of a substantial milestone or work product.

Project Activities Represent the Engagement Lifecycle

An activity is the next level of organization below a phase. Tasks in OUM are grouped into activities to better represent the engagement lifecycle. For example, Gather Solution Requirements is one of the activities within the Inception phase. This activity consists of five tasks related to collecting requirements for the solution.

Activities allow the project manager to streamline creation and management of the Work Breakdown Structure (WBS) for an engagement. Because all tasks fall within an activity, project managers (and other practitioners) are able to manage to the activity-level rather than the task-level.

Managing an OUM Project

The Manage focus area provides a framework in which all types of projects can be planned, estimated, controlled, and completed in a consistent manner. Oracle's Project Management Method (PJM) is part of the Manage focus area. Consistency is required in today's business environment, where projects often implement packages, develop application extensions, and create a data warehouse in order to satisfy a business need.

Project Management enables the project manager to manage delivery of an agreed upon level of solution quality while planning for and controlling the scope, cost, and schedule.

The Manage focus area (or PJM) has three phases:

- Project Start Up Phase
- Project Execution and Control Phase
- Project Closure Phase

Integration of the Manage focus area phases with the Implement focus area phases is illustrated below:

Manage Focus Area Integration with the Implement Focus Area

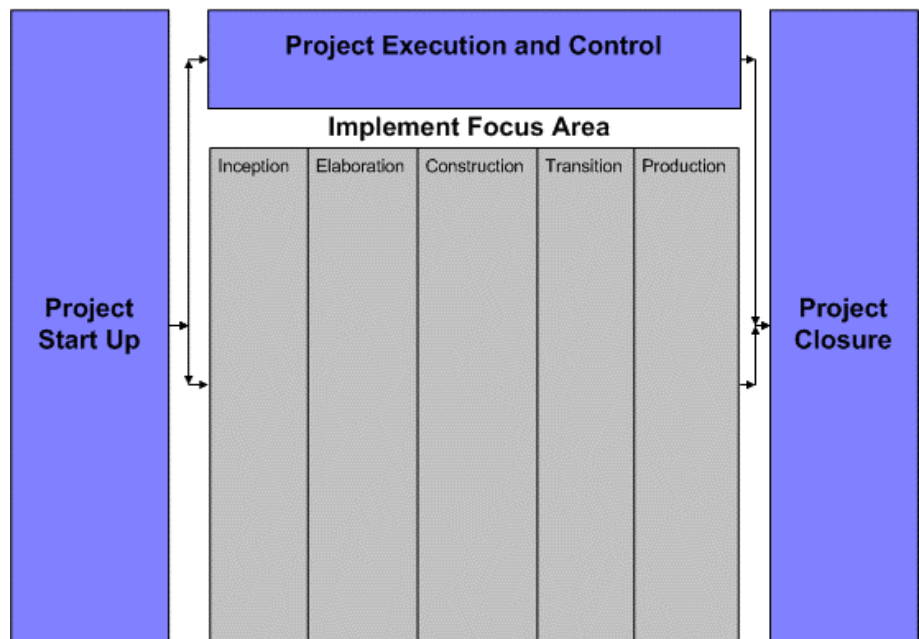


Figure 2 - OUM Manage Focus Area

The Project Start Up phase precedes the Inception phase. Project startup is where all of the project planning activities take place and where policies, procedures, and strategies are defined for each of the PJM processes, which govern the conduct of the engagement.

Project Execution and Control runs concurrently with the Implement focus area phases. The purpose of the Project Execution and Control Phase is to provide adequate visibility into actual progress so that management can take effective actions when the project's performance deviates significantly from the project plans. The Project Execution and Control Phase includes tracking and reviewing the projects accomplishments and results against documented WBS, project estimates, time schedule, resources plan, and cost budget, and adjusting these plans based on the actual accomplishment and results.

The Project Closure phase occurs after the Production phase. During this phase, the project is "closed" from an administrative and contractual standpoint. This includes ensuring the project work products are complete and meet the customer's expectations, gaining final acceptance and securing all documents for reuse, collection and retention.

The Manage focus area is organized into 13 processes:

- Bid Transition
- Scope Management
- Financial Management
- Work Management
- Risk Management
- Issue and Problem Management
- Staff Management
- Communication Management
- Quality Management
- Configuration Management
- Infrastructure Management
- Procurement Management
- Organizational Change Management

Collectively, these processes form a comprehensive set of tasks required to manage Oracle-based development and implementation projects. Every project includes most, if not all, of these processes, whether they are the responsibility of a consulting organization, a client organization, or a third party.

DEVELOPING AND MAINTAINING ENTERPRISE ARCHITECTURE ACTIVITIES

The Envision focus area provides a framework for development and maintenance of enterprise level IT strategy, architecture, and governance. The Envision guidance helps project teams transition from enterprise-level planning and strategy activities to the identification and initiation of specific projects.

The Envision focus area consists of two phases:

- Initiate
- Maintain and Evolve

The Initiate phase is used to perform a set of foundational tasks. These tasks have a broad range of objectives and applicability. At one end, the Initiate phase can establish the vision for one or more projects intended to achieve a focused set of business objectives. On the other end, the Initiate phase can result in establishment of a broad set of enterprise level IT processes that are continued in the Maintain and Evolve phase.

The Maintain and Evolve phase forms the foundation for governing and managing enterprise level business processes and strategies. Envision is not intended to be a broad treatise on corporate strategic planning. It is focused on information technology related business architecture and practices.

The Envision focus area is organized into six processes:

- Envision Roadmap
- Enterprise Business Analysis
- Organizational Change Management
- Enterprise Architecture
- IT Portfolio Management
- IT Governance

The Envision focus area extends OUM's capabilities beyond implementation and management of IT projects into the realm of vision and strategy. It is not likely that all of Envision's processes and tasks will be executed within any single enterprise, nor is it likely that Envision will ever contain an exhaustive set of enterprise level processes. Rather, Envision should serve as a framework that can be scaled to suit the needs of a particular enterprise.

COMPONENTS OF OUM

With OUM, you receive the following:

- **Overview Materials** – Provides an overview of OUM's approach to IT projects, including the industry standards upon which OUM is based.
- **Guidelines** – Phases, processes, tasks, roles, and template guidelines that cover every aspect of an Oracle-based business solution.
- **Templates** – Templates enable fast and easy creation of high quality work products.
- **Tailored Work Breakdown Structure** – These standards enable an easy start in managing your project.

HARDWARE AND SOFTWARE REQUIREMENTS

The following hardware and software are required to run OUM:

- Minimum of 1 GHz processor speed
- 55 MB of disk space
- 520 MB RAM minimum
- Windows 2000, XP, NT 4.0
- Microsoft Office 2000 or later
- Microsoft Project 98 or later (Optional)
- Microsoft Visio 5.0 or later (Optional)
- Adobe Acrobat Reader 6.0 or later
- Microsoft Internet Explorer version 6.0 or later or Netscape 7.0 or later

CONCLUSION

With OUM, Oracle's full lifecycle method for deploying Oracle-based business solutions, you can move efficiently through the IT lifecycle to quickly achieve measurable business results.

For more information about OUM, contact ominfo_us@oracle.com. For more information about the OUM Customer Program, contact your Oracle Sales Representative.

For more information about Oracle Consulting, contact your local Oracle Consulting representative at 1-800-633-0615, email ask-oracleconsulting_us@oracle.com, or visit www.oracle.com/consulting.



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