Estacionamento

Especificação de Requisitos Não-Funcionais

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# Introduction

# System-Wide Functional Requirements

[Statement of system-wide functional requirements, not expressed as use cases. Examples include auditing, authentication, printing, reporting.]

Dentre os requisitos não funcionais do sistema estão:

* Impressão de ticket ao motorista
* Impressão de relatórios:
  + Lucratividade
  + Rotatividade
  + Quantidade de carros dentro do estacionamento, por hora, por dia, semana e mês.
* Autenticação do ticket na leitora de código de barras, no caixa.

# System Qualities

[Qualities represent the URPS in FURPS+ classification of supporting requirements.]

## Usability

[Describe requirements for qualities such as easy of use, easy of learning, usability standards and localization.]

O sistema de Estacionamento traz uma facilidade para o motorista, que para entrar e sair somente precisa retirar o ticket na entrada e entrega-lo na saída. O funcionário responsável pelo recebimento do pagamento passa o ticket na leitora de código de barras e faz a cobrança. O dono do estacionamento poderá utilizar os relatórios fornecidos pelo sistema para tomar decisões.

## Reliability

[Reliability includes the product and/or system's ability to keep running under stress and adverse conditions. Specify requirements for reliability acceptance levels, and how they will be measured and evaluated. Suggested topics are availability, frequency of severity of failures and recoverability.]

O sistema é seguro e resistente a falhas. Por ter uma interação simples com os usuários, ele corre pouco risco de ser corrompido.

## Performance

[The performance characteristics of the system should be outlined in this section. Examples are response time, throughput, capacity and startup or shutdown times.]

A inicialização do computador responsável pelo recebimento dos pagamentos pode demorar de acordo com a configuração dela. Após o início do computador, o sistema leva 5 segundos para estar pronto para o uso. A partir do momento em que as catracas são ligadas começam a operar em alguns segundos.

## Supportability

[This section indicates any requirements that will enhance the supportability or maintainability of the system being built, including adaptability and upgrading, compatibility, configurability, scalability and requirements regarding system installation, level of support and maintenance.]

O sistema Estacionamento é desenvolvido em Java, uma linguagem que tem suporte multiplataforma. O banco de dados usado tem melhor performance em sistemas operacionais Linux.

# System Interfaces

[Interface Requirements are part of the + in the FURPS+ classification of supporting requirements. Define the interfaces that must be supported by the application. It should contain adequate specificity, protocols, ports and logical addresses, and so forth, so that the software can be developed and verified against the interface requirements.]

As interfaces usadas pelo sistema são: uma tela do computador, uma leitora de código de barras e as catracas.  
As catracas serão conectadas ao servidor através da rede, assim como o computador usado nos pagamentos. A leitora de código de barras será conectada ao computador usado nos recebimentos do pagamento, através de uma porta USB.

## User Interfaces

[Describe the user interfaces that are to be implemented by the software. The intention of this section is to state requirements relating to the interface. Interface design may overlap the requirements gathering process.]

### Look & Feel

[Provide a description of the spirit of the interface. Your client may have given you particular demands such as style, colors to be used, and degree of interaction and so on. This section captures the requirements for the interface rather than the design for the interface.]

A interfase do sistema será simples, intuitiva e objetiva. Contará com botões grandes e letras grandes para garantir uma boa visualização e evitar erros. As janelas manterão o estilo do sistema operacional em que estará instalado, evitando, assim, estranheza por parte do usuário.

O usuário deve se sentir muito a vontade de usar o sistema.

### Layout and Navigation Requirements

[Capture requirements on major screen areas and how they should be grouped together.]

### Consistency

[Consistency in the user interface enables users to predict what will happen. This section states requirements on the use of mechanisms to be employed in the user interface. This applies both within the system and with other systems and can be applied at different levels: navigation controls, screen areas sizes and shapes, placements for entering / presenting data, terminology.]

### User Personalization & Customization Requirements

[Requirements on content that should automatically displayed to users or available based on user attributes. Sometimes users allowed to customize the content displayed or to personalize displayed content.]

Não se aplica.

## Interfaces to External Systems or Devices

[Are there any external systems with which this system must interface? Are there any constraints on the nature of the interface between this system and any external system, such as the format of data passed between these systems, and any particular protocol used? Consider both provided and required interfaces.]

O sistema conversará diretamente com a leitora de código de barras. Essa interface será através de uma porta USB e o driver fornecido junto à leitora.

As catracas estarão conectadas em rede com o sistema e será responsável pela impressão dos tickets com data, hora e código de barras. Esses dados serão guardados no banco de dados.

### Software Interfaces

[This section describes software interfaces to other components of the software system. These may be purchased components, components reused from another application or components being developed for subsystems outside of the scope of this SRS, but with which this software application must interact.]

### Hardware Interfaces

[This section defines any hardware interfaces that are to be supported by the software, including logical structure, physical addresses, expected behavior, and so on.]

### Communications Interfaces

[Describe any communications interfaces to other systems or devices such as local area networks, remote serial devices, and so on.]

A conexão entre os dispositivo se dará por uma intranet. Somente a leitora de código de barras que estará ligada através de uma porta USB com o computador responsável pelo recebimento das tarifas.

# Business Rules

[Business rules are statements that define or constrain some aspect of the business. Business rules are often represented as production rules when they are meant to be directly executed by an IT System: a production rule is an independent statement of programming logic that specifies the execution of one or more actions in the case that its conditions are satisfied. Production Rules define the operation semantic for the system in a technologic independent way. They constrain the behavior expressed in system use cases.

Organize this document on rule classes, a high level grouping of candidate or actual rules about one **business concept** with a specific kind of **logic processing**, example: Driver Risk Assessment Rules or Customer Validation Rules.]

## <Rule class name>

### <Rule name and ID>

[The description defines the rule. It can be made in natural language typically following a decision table or a pattern like: if [condition-list] then [action-list], example:

If there are at least 3 items of the same type in the customer shopping cart and each item’s value is greater than $30 then give to the customer a voucher whose value is 10% of the cheapest item.]

# System Constraints

[Constraints are part of the + in the FURPS+ classification of supporting requirements. Describe any design; implementation or deployment constraints on the system being built that have been mandated and must be adhered to. Examples include software implementation languages, prescribed use of developmental tools, third-party components or class libraries, platform support, resource limits and requirements on the shape, size or weight of the resulting hardware housing the system.]

# System Compliance

## Licensing Requirements

[Define any licensing enforcement requirements or other usage restriction requirements that are to be exhibited by the software.]

Não há restrições de licenciamento quanto ao sistema fornecido pela 4Coffee. Como ele é um programa compilado, o código fonte é protegido.

## Legal, Copyright, and Other Notices

[This section describes any necessary legal disclaimers, warranties, copyright notices, patent notice, wordmark, trademark, or logo compliance issues for the software.]

## Applicable Standards

[This section describes by reference any applicable standards and the specific sections of any such standards that apply to the system being described. For example, this could include legal, quality and regulatory standards, industry standards for usability, interoperability, internationalization, operating system compliance, and so forth.]

# System Documentation

[Describes the requirements, for on-line user documentation, help systems, help about notices, and so on. Set expectations for the documentation and to identify who will be responsible for creating it.]