#### KARLSRUHE INSTITUTE OF TECHNOLOGY

# SOFTWARE ENGINEERING PRACTICE WINTER TERM 2015/2016

# rootJS

Node.js bindings for ROOT 6

Jonas Schwabe Theo Beffart Sachin Rajgopal Christoph Wolff Christoph Haas Maximilian Früh

supervised by Dr. Marek Szuba



# Contents



# 1. NodeApplication

describe class NodeApplication here

## 1.1. ctorCallback

Name	NodeApplication::ctorCallback(args:	FunctionCallbackInfo <value>)</value>
Visibility	Public	
Parameters	$args:\ Function Callback Info < Value>$	
Return value	none	
behavior	describe beahviour	



#### 1.2. staticCtorCallback

Name	NodeApplication::staticCtorCallback(args:FunctionCallbackInfo <value>)</value>
Visibility	Public
Parameters	$args:\ Function Callback Info < Value>$
Return value	none
behavior	describe beahviour



#### 1.3. memberGetterCallback

Name	NodeApplication::memberGetterCallback(property: Local <string>, info: PropertyCallbackInfo<value>)</value></string>	
Visibility	Public	
Parameters	$property:\ Local < String >,\ info:\ Property Callback Info < Value >$	
Return value	none	
behavior	describe beahviour	



#### 1.4. memberSetterCallback

Name	<pre>NodeApplication::memberSetterCallback(property: Local<string>, value: Local<value>, info: PropertyCallbackInfo<value>)</value></value></string></pre>
Visibility	Public
Parameters	$property: \ Local < String>, \ value: \ Local < Value>, \ info: \ Property Callback-Info < Value>$
Return value	none
behavior	describe beahviour



#### 1.5. memberFunctionCallback

Name	NodeApplication::memberFunctionCallback(args:FunctionCallbackInfo <value>)</value>
Visibility	Public
Parameters	$args:\ Function Callback Info < Value>$
Return value	none
behavior	describe beahviour



#### 1.6. staticGetterCallback

Name	<pre>NodeApplication::staticGetterCallback(property: Local<string>, info: PropertyCallbackInfo<value>)</value></string></pre>
Visibility	Public
Parameters	$property:\ Local < String >,\ info:\ Property Callback Info < Value >$
Return value	none
behavior	describe beahviour



#### 1.7. staticSetterCallback

Name	<pre>NodeApplication::staticSetterCallback(property: Local<string>, value: Local<value>, info: PropertyCallbackInfo<value>)</value></value></string></pre>
Visibility	Public
Parameters	$property: \ Local < String>, \ value: \ Local < Value>, \ info: \ Property Callback-Info < Value>$
Return value	none
behavior	describe beahviour



#### 1.8. staticFunctionCallback

Name	NodeApplication::staticFunctionCallback(args:FunctionCallbackInfo <value>)</value>
Visibility	Public
Parameters	$args:\ Function Callback Info < Value>$
Return value	none
behavior	describe beahviour



#### 1.9. Initialize

Name	NodeApplication::Initialize(exports: Local <object>, module: Local<object>)</object></object>
Visibility	Public
Parameters	$exports:\ Local < Object>,\ module:\ Local < Object>$
Return value	none
behavior	describe beahviour



#### 1.10. Instance

Name	NodeApplication::Instance()
Visibility	Public
Parameters	none
Return value	NodeApplication describe return value
behavior	describe beahviour



# 1.11. getIsolate

Name	NodeApplication::getIsolate()
Visibility	Public
Parameters	none
Return value	Isolate* describe return value
behavior	describe beahviour



## 1.12. getExports

Name	NodeApplication::getExports()
Visibility	Public
Parameters	none
Return value	Local <object> describe return value</object>
behavior	describe beahviour



# $1.13. \ {\tt getTemplateFactory}$

Name	NodeApplication::getTemplateFactory()
Visibility	Public
Parameters	none
Return value	TemplateFactory describe return value
behavior	describe beahviour



# $1.14. \ {\bf getFunctionFactory}$

Name	NodeApplication::getFunctionFactory()
Visibility	Public
Parameters	none
Return value	ProxyFunctionFactory describe return value
behavior	describe beahviour



# 1.15. getObjectFactory

Name	NodeApplication::getObjectFactory()
Visibility	Public
Parameters	none
Return value	ProxyObjectFactory describe return value
behavior	describe beahviour



# 2. TemplateFactory

describe class TemplateFactory here

# 2.1. createTemplate

Name	TemplateFactory::createTemplate(clazz: TClassRef)
Visibility	Public
Parameters	clazz: TClassRef
Return value	Local <functiontemplate> describe return value</functiontemplate>
behavior	describe beahviour



# ${\bf 3.}\ {\bf Template Cache}$

describe class TemplateCache here

#### 3.1. contains

Name	TemplateCache::contains(type: TClassRef)
Visibility	Public
Parameters	type: TClassRef
Return value	bool describe return value
behavior	describe beahviour



## 3.2. get

Name	TemplateCache::get(type: TClassRef)
Visibility	Public
Parameters	type: TClassRef
Return value	Local <functiontemplate> describe return value</functiontemplate>
behavior	describe beahviour



#### **3.3.** store

Name	<pre>TemplateCache::store(type: TClassRef, tpl: Local<functiontemplate>)</functiontemplate></pre>
Visibility	Public
Parameters	$type:\ TClassRef,\ tpl:\ Local{<} FunctionTemplate{}>$
Return value	none
behavior	describe beahviour



# 4. ProxyFunctionFactory

describe class ProxyFunctionFactory here

## 4.1. createProxyFunction

Name	ProxyFunctionFactory::createProxyFunction(info: TMethod)
Visibility	Public
Parameters	info: TMethod
Return value	ProxyFunciton describe return value
behavior	describe beahviour



## 4.2. from Args

Name	ProxyFunctionFactory::fromArgs(name: string, clazz: TClassRef, args: FunctionCallbackInfo)
Visibility	Public
Parameters	$name:\ string,\ clazz:\ TClassRef,\ args:\ FunctionCallbackInfo$
Return value	ProxyFunction describe return value
behavior	describe beahviour



# 5. ProxyFunction

describe class ProxyFunction here

# 5.1. ProxyFunction

Name	ProxyFunction::ProxyFunction(address: void*, info: TFunction)
Visibility	Public
Parameters	address: void*, info: TFunction
Return value	«constructor» describe return value
behavior	describe beahviour



## 5.2. convertArgs

Name	ProxyFunction::convertArgs(args: FunctionCallbackInfo)
Visibility	Public
Parameters	$args:\ Function Callback Info$
Return value	ProxyObject[] describe return value
behavior	describe beahviour



#### 5.3. call

Name	ProxyFunction::call(args: ProxyObject[])
Visibility	Public
Parameters	args: ProxyObject[]
Return value	ProxyObject describe return value
behavior	describe beahviour



# 5.4. isTemplateFunction

Name	ProxyFunction::isTemplateFunction()
Visibility	Public
Parameters	none
Return value	bool describe return value
behavior	describe beahviour



# 6. ProxyObjectFactory

describe class ProxyObjectFactory here

# 6.1. createProxyObject

Name	<pre>ProxyObjectFactory::createProxyObject(type: ProxyObject)</pre>	TDataMember, holder:
Visibility	Public	
Parameters	type: TDataMember, holder: ProxyObject	
Return value	ProxyObject describe return value	
behavior	describe beahviour	



# 7. ProxyObject

describe class ProxyObject here

# 7.1. ProxyObject

Name	ProxyObject::ProxyObject(address:	void*, type:	TDataMember)
Visibility	Public		
Parameters	address: void*, type: TDataMember		
Return value	«constructor» describe return value		
behavior	describe beahviour		



# $7.2. \ getAddress$

Name	ProxyObject::getAddress()
Visibility	Public
Parameters	none
Return value	void* describe return value
behavior	describe beahviour



## 7.3. getType

Name	ProxyObject::getType()
Visibility	Public
Parameters	none
Return value	TDataMember describe return value
behavior	describe beahviour



#### 7.4. set

Name	ProxyObject::set(value: ProxyObject)
Visibility	Public
Parameters	value: ProxyObject
Return value	none
behavior	describe beahviour



## 7.5. get

Name	ProxyObject::get()
Visibility	Public
Parameters	none
Return value	Local < Value > describe return value
behavior	describe beahviour



#### 7.6. isPrimitive

Name	ProxyObject::isPrimitive()
Visibility	Public
Parameters	none
Return value	bool describe return value
behavior	describe beahviour