# Contact UML

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## Contact

- name:String
- phone:String
- email:String
- address:String
- <u>DELIMITER:String</u>

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+ <<constructor>> Contact()
+ <<constructor>> Contact(rawInformation:String)
+ <<constructor>> Contact(name:String, phone:String, email:String, address:String)
+ toString():String
- <u>isValidPhone(phone:String):boolean</u>
- <u>isValidEmail(email:String):boolean</u>

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## ContactBuilder

- contacts:ArrayList<Contact>

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+ <<constructor>> ContactBuilder()
+ load(inputFilePath:String):int
+ size():int
+ get(contactID:int):Contact
+ getAll():ArrayList<Contact>
+ add(newContact:Contact):void
+ editName(contactID:int, newValue:String):void
+ editPhone(contactID:int, newValue:String):void
+ editEmail(contactID:int, newValue:String):void
+ editAddress(contactID:int, newValue:String):void
+ search(query:String):ArrayList<Contact>
+ sortByName():void
+ sortByPhone():void
+ sortByEmail():void
+ sortByAddress():void
+ reverseOrder():void
+ save(outputFilePath:String):void
+ isEmpty():boolean
- isValidContactID(contactID:int):boolean
- isDuplicate(newContactmContact):boolean

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## ContactManager

- <u>filePath:String</u>
- <u>contactBook:ContactBuilder</u>
- <u>userInputScanner:Scanner</u>

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+ <u>main(args:String[]):void</u>
- <u>operate():void</u>
- <u>loadContactsFromFile():void</u>
- <u>viewAllContacts():void</u>
- <u>addNewContact():void</u>
- <u>editContact():void</u>
- <u>deleteContact():void</u>
- <u>searchContact():void</u>
- <u>sortContacts():void</u>
- <u>saveContactsToFile():void</u>
- <u>quitProgram():void</u>
- <u>waitForUserToReadOutput():void</u>
- <u>promptNewContact():Contact</u>
- <u>promptContactID():int</u>
- <u>promptUserOption(options:String[]):int</u>