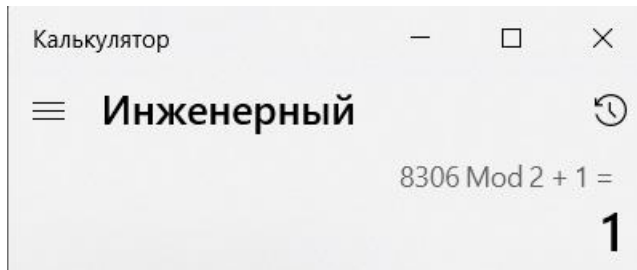НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ УКРАЇНИ

"КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ ІМЕНІ ІГОРЯ СІКОРСЬКОГО"

Факультет інформатики та обчислювальної техніки

Кафедра обчислювальної техніки

Лабораторна робота № 4

з дисципліни

"Програмування мобільних систем"

Виконав:

студент групи ІВ-83

ЗК ІВ-8306

Грисюк Михайло

Київ 2021

Варіант

Варіант 1
Предметна область – фільми

Лістинг коду

Manager.swift

```swift
//
//  Manager.swift
//  Lab1-1
//
//  Created by misha_hrysiuk on 29.04.2021.
//
import Foundation
import UIKit

final class Manager {
    static let shared = Manager()
}
extension Manager {
    public func getText<T>(_ textName: String, type: T.Type) -> T? where T
: Decodable{
        if let filePath = Bundle.main.path(forResource: textName, ofType:
"txt") {
            do {
                let text = try String(contentsOfFile: filePath)
                let jsonData = text.data(using: .utf8)!
                let json = try! JSONDecoder().decode(type.self, from:
jsonData)
                return json
            } catch {
                print("No such file")
            }
        }
        return nil
    }
    public func getImage (_ fileName: NSString) -> UIImage?{
        let name = fileName.deletingPathExtension
        let type = fileName.pathExtension
        if let path = Bundle.main.path(forResource: name, ofType: type) {
            return UIImage(contentsOfFile: path)
        } else {
            return nil
        }
    }
}
```

AddMovieViewConroller.swift

```swift
//
//  AddMovieViewConroller.swift
//  Lab1-1
//
//  Created by misha_hrysiuk on 29.04.2021.
//
import UIKit

class AddMovieViewController: UIViewController {
    var movie:Movie?

    private let scrollView: UIScrollView = {
        let scrollView = UIScrollView()
        scrollView.clipsToBounds = true
        return scrollView
    }()

    private let titleLabel: UILabel = {
        let label = UILabel()
        label.text = "Title"
        label.font = label.font.withSize(20)
        return label
    }()

    private let titleField:UITextField = {
        let field = UITextField()
        field.layer.borderWidth = 1
        field.layer.cornerRadius = 10
        field.layer.borderColor = UIColor.gray.cgColor

        return field
    }()

    private let typeLabel: UILabel = {
        let label = UILabel()
        label.text = "Type"
        label.font = label.font.withSize(20)
        return label
    }()


    private let typeField: UITextField = {
        let field = UITextField()
        field.layer.borderWidth = 1
        field.layer.cornerRadius = 10
        field.layer.borderColor = UIColor.gray.cgColor
        return field
    }()

    private let yearLabel: UILabel = {
        let label = UILabel()
        label.text = "Year"
        label.font = label.font.withSize(20)
        return label
    }()

    private let yearField: UITextField = {
        let field = UITextField()
        field.layer.borderWidth = 1
```

```swift
        field.layer.cornerRadius = 10
        field.layer.borderColor = UIColor.gray.cgColor
        field.keyboardType = .numberPad
        field.tag = 1
        return field
    }()

    private let button:UIButton = {
        let button = UIButton()
        button.setTitle("Add", for: .normal)
        button.setTitleColor(.systemBlue, for: .normal)
        button.addTarget(self, action: #selector(didTapAddButton), for: .touchUpInside)

        return button

    }()

    @objc func didTapAddButton() {
        titleField.resignFirstResponder()
        yearField.resignFirstResponder()
        typeField.resignFirstResponder()

        let title = titleField.text ?? ""
        let year = yearField.text ?? ""
        let type = typeField.text ?? ""

        movie = Movie(title: title, year: year, type: type)

        performSegue(withIdentifier: "unwindToList", sender: nil)
    }

    override func viewDidLoad() {
        super.viewDidLoad()

        titleField.delegate = self
        yearField.delegate = self
        typeField.delegate = self

        view.backgroundColor = .white
        view.addSubview(scrollView)
        scrollView.addSubview(titleLabel)
        scrollView.addSubview(titleField)
        scrollView.addSubview(typeLabel)
        scrollView.addSubview(typeField)
        scrollView.addSubview(yearLabel)
        scrollView.addSubview(yearField)
        scrollView.addSubview(button)
        registerNotifications()
        hideKeyboard()
    }

    override func viewDidLayoutSubviews() {
        super.viewDidLayoutSubviews()
        scrollView.frame = view.bounds

        titleLabel.frame = CGRect(x: 40, y: 20, width: view.bounds.width - 80, height: 40)
        titleField.frame = CGRect(x: 40, y: titleLabel.frame.origin.y + titleLabel.frame.height + 5, width: scrollView.bounds.width - 80, height: 40)
```

```swift
        typeLabel.frame = CGRect(x: 40, y: titleField.frame.origin.y +
titleField.frame.height + 10, width: scrollView.bounds.width - 80, height:
40)
        typeField.frame = CGRect(x: 40, y: typeLabel.frame.origin.y +
typeLabel.frame.height + 5, width: scrollView.bounds.width - 80, height:
40)
        yearLabel.frame = CGRect(x: 40, y: typeField.frame.origin.y +
typeField.frame.height + 10, width: scrollView.bounds.width - 80, height:
40)
        yearField.frame = CGRect(x: 40, y: yearLabel.frame.origin.y +
yearLabel.frame.height + 5, width: scrollView.bounds.width - 80, height:
40)
        button.frame = CGRect(x: scrollView.bounds.width/2 - 20, y:
yearField.frame.origin.y + yearField.frame.height + 10, width: 40, height:
30)
    }

}

extension AddMovieViewController:UITextFieldDelegate {
    func textFieldDidEndEditing(_ textField: UITextField) {
        if !textField.text!.isEmpty {
            if(textField.tag == 1) {
                if(textField.text?.rangeOfCharacter(from:
CharacterSet.decimalDigits.inverted) != nil) {
                    textField.text = ""
                }
            }
        }
    }
    func textFieldShouldReturn(_ textField: UITextField) -> Bool {
        textField.resignFirstResponder()
        return true
    }
}

extension AddMovieViewController {
    func registerNotifications() {
        NotificationCenter.default.addObserver(self, selector:
#selector(keyboardWillShow), name:
UIResponder.keyboardWillShowNotification, object: nil)
        NotificationCenter.default.addObserver(self, selector:
#selector(keyboardWillHide), name:
UIResponder.keyboardWillHideNotification, object: nil)
    }

    @objc func keyboardWillShow(notification: NSNotification) {
        if let keyboardSize =
(notification.userInfo?[UIResponder.keyboardFrameBeginUserInfoKey] as?
NSValue)?.cgRectValue {
            scrollView.contentInset = UIEdgeInsets(top: 0, left: 0, bottom:
keyboardSize.height + button.frame.maxY -
self.tabBarController!.tabBar.frame.size.height, right: 0)
            scrollView.scrollIndicatorInsets = scrollView.contentInset
        }
    }
    @objc func keyboardWillHide(notification: NSNotification) {
        scrollView.contentInset = .zero
        scrollView.scrollIndicatorInsets = scrollView.contentInset
    }
```

```swift
    func hideKeyboard() {
        let tap = UITapGestureRecognizer(target: self, action:
#selector(dismissKeyboard))
        tap.cancelsTouchesInView = false
        view.addGestureRecognizer(tap)
    }
    @objc func dismissKeyboard() {
        view.endEditing(true)
    }
}
```

MovieDetailsViewController.swift

```swift
//
//  MovieDetailsViewController.swift
//  Lab1-1
//
//  Created by misha_hrysiuk on 29.04.2021.
//
import UIKit

class MovieDetailsViewController: UIViewController {

    var details: Movie?

    @IBOutlet var poster: UIImageView!
    @IBOutlet var movieTitle: UILabel!
    @IBOutlet var genre: UILabel!
    @IBOutlet var year: UILabel!
    @IBOutlet var director: UILabel!
    @IBOutlet var actors: UILabel!
    @IBOutlet var country: UILabel!
    @IBOutlet var language: UILabel!
    @IBOutlet var production: UILabel!
    @IBOutlet var released: UILabel!
    @IBOutlet var runtime: UILabel!
    @IBOutlet var awards: UILabel!
    @IBOutlet var rating: UILabel!
    @IBOutlet var plot: UILabel!

    override func viewDidLoad() {
        super.viewDidLoad()
        setImageAndLabels()
    }
    func setImageAndLabels() {
        poster.image = Manager.shared.getImage(details!.poster as NSString)
        movieTitle.text = "Title: " + details!.title
        year.text = "Year: " + details!.year
        genre.text = "Genre: " + details!.genre!
        director.text = "Director: " + details!.director!
        actors.text = "Actors: " + details!.actors!
        country.text = "Country: " + details!.country!
        language.text = "Language: " + details!.language!
        production.text = "Production: " + details!.production!
        released.text = "Released: " + details!.released!
        runtime.text = "Runtime: " + details!.runtime!
        awards.text = "Awards: " + details!.awards!
        rating.text = "Rating: " + details!.rated!
        plot.text = "Plot: " + details!.plot!
    }
}
```
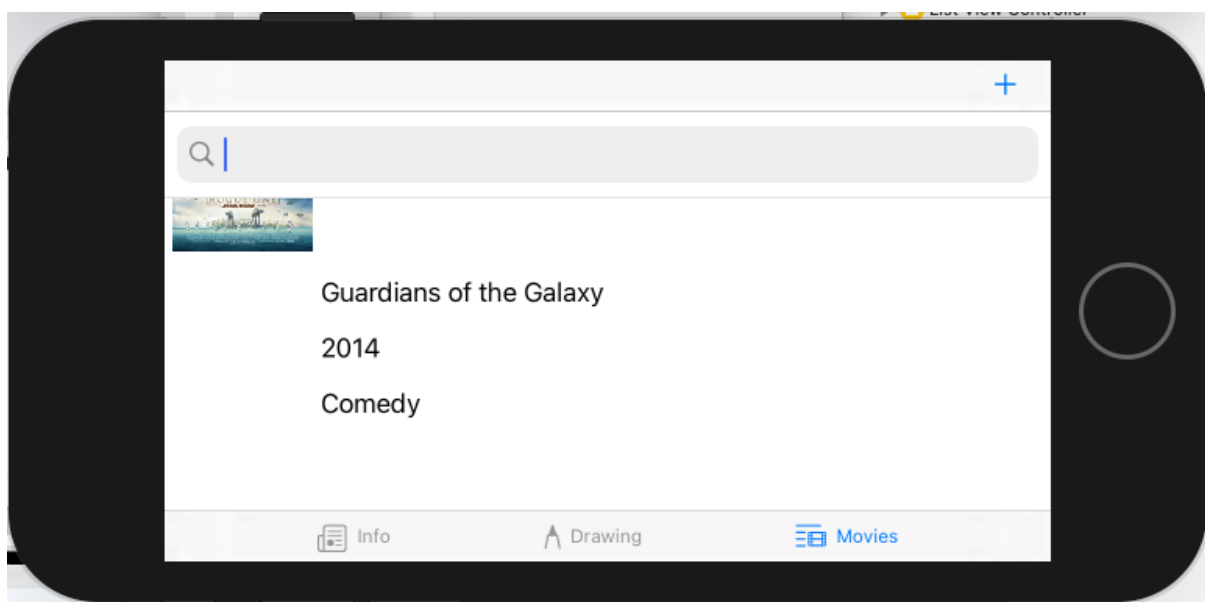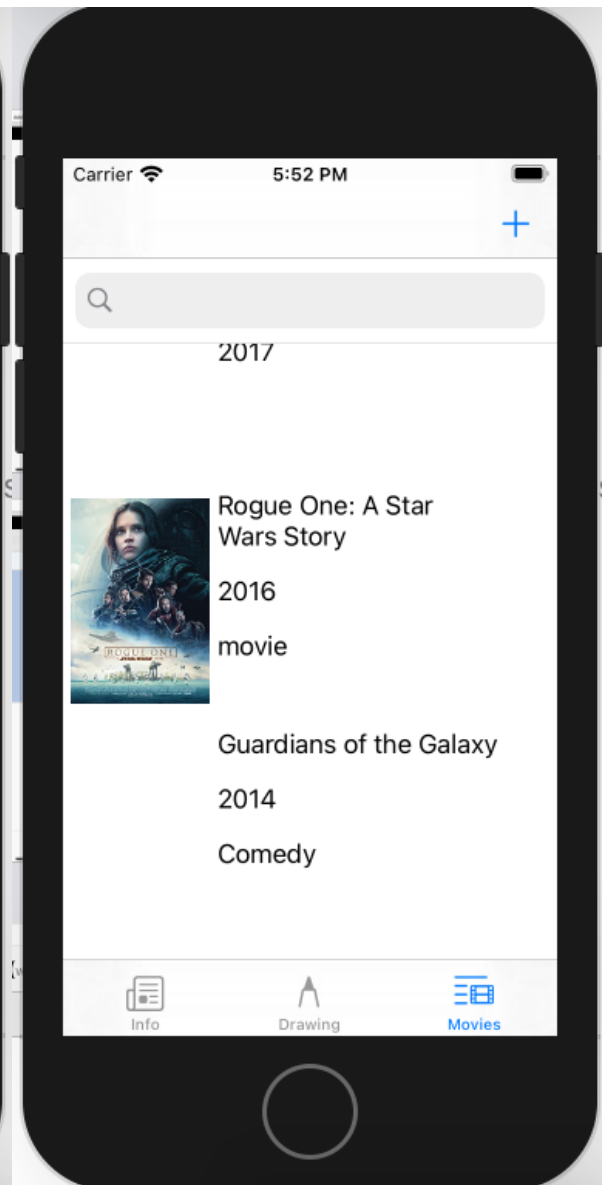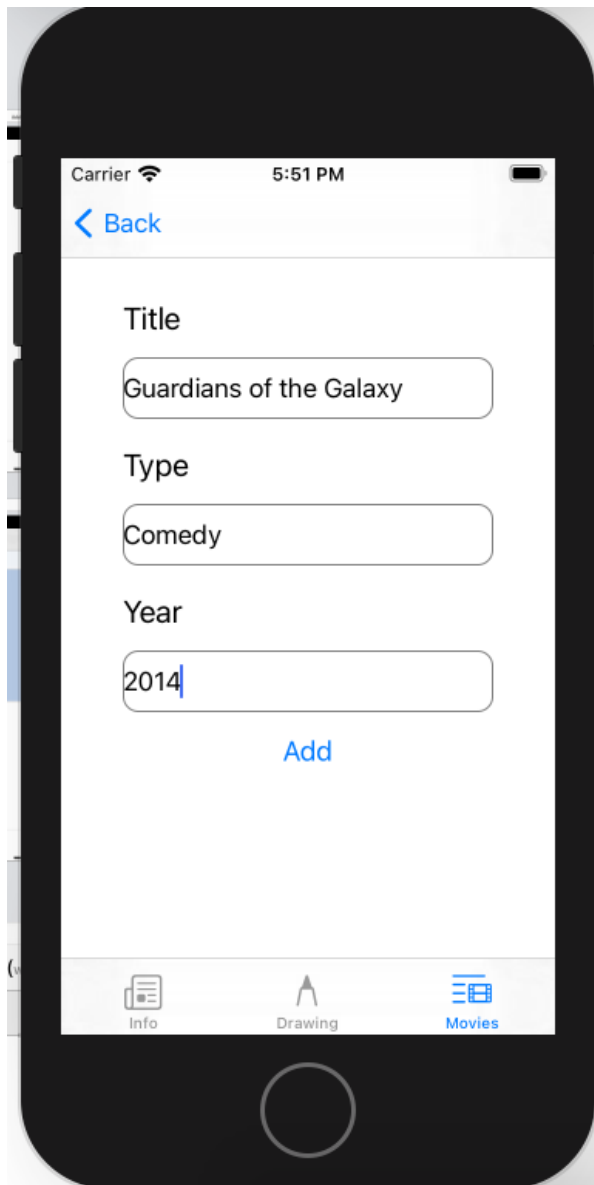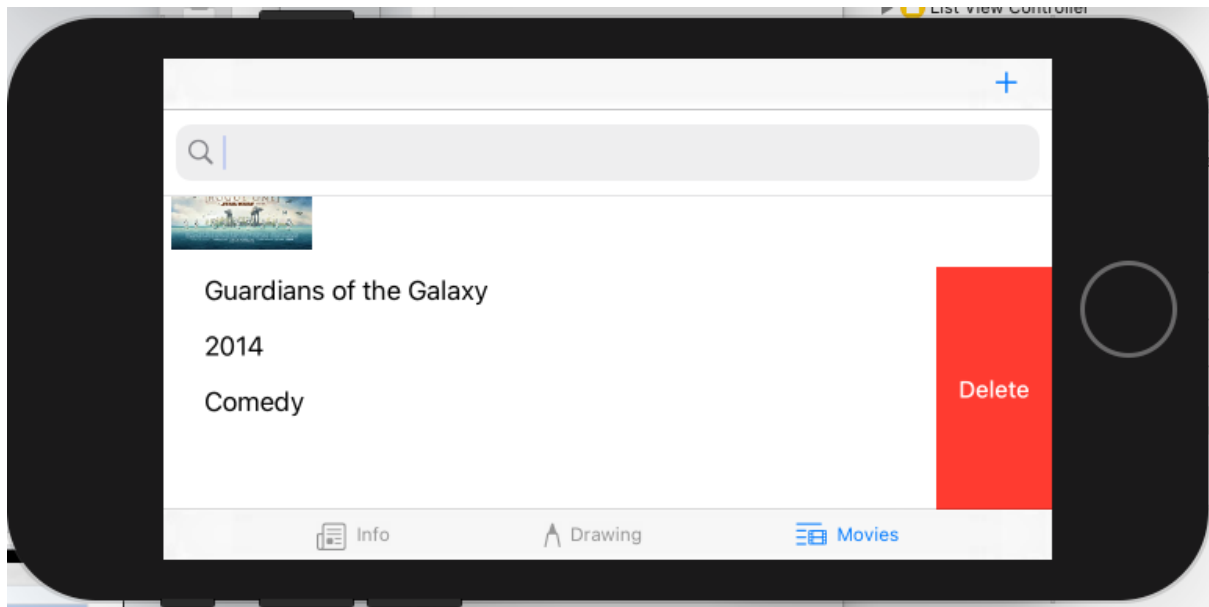
Скріншот роботи програми

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Title

Guardians of the Galaxy

Type

Comedy

Year

2014

Add

Info | Drawing | **Movies**

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🔍

2017

Rogue One: A Star Wars Story

2016

movie

Guardians of the Galaxy

2014

Comedy

Info | Drawing | **Movies**

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Guardians of the Galaxy

2014

Comedy

Info | Drawing | **Movies**

Висновок

В цій лабораторній роботі була дороблена програма з лабораторної роботи №4. Було створено вкладку "Movies", тепер під час клікання на фільм вискакує його детальна інформація, також було добавлено функції додавання і видалення фільму. Як видно на скріншотах програма працює коректно при вертикальній і горизонтальній положеннях.