

```

class StudentScoreManagement:
    """学生成绩管理系统"""
    def __init__(self):
        # 登录状态
        self.login_status = False
        # 登录账号的权限
        self.permission = None
        # 账号身份验证码
        self.admin_code = "admin1234"
        self.student_code = "1234"
        # 存储学生成绩的字典
        self.Guess = {
            '小明':{'数学':90,'语文':80,'英语':100},
            '小红':{'数学':88,'语文':100,'英语':90}
        }
        # 存储已注册账号的字典
        self.userids = {
            "admin":{
                "admin":{"name":"李老师","pwd":"admin1234"},
                "admin1":{"name":"王老师","pwd":"admin1234"},
            },
            "student":{
                "xx123":{"name":"小明","pwd":"123456"},
                "xx456":{"name":"小红","pwd":"654321"}
            }
        }
        # 储存功能权限的字典
        # 定义不同用户类型及其对应的权限菜单
        self.permission_dict = {
            "admin": [
                "查询成绩",
                "修改成绩",
                "查询排名",
                "添加成绩",
                "查平均分",
                "退出"
            ],
            "student": [
                "查询成绩",
                "查询排名",
                "查平均分",
                "退出"
            ]
        }
        self.menu("欢迎使用学生成绩管理系统！")

    def login(self,*args,**kwargs):
        attempts = 3
        while attempts > 0:
            str1 = "重新" if attempts!= 3 else ""
            userid = input(f"请{str1}输入账号：")

```

```

        password = input("请输入密码: ")
        if userid in self.userids["admin"] and password == self.userids["admin"]
[userid]['pwd']:
            self.login_status = True
            self.permission = "admin"
            return self.menu(f"登录成功! 欢迎{self.userids['admin'][userid]['name']}
使用系统! ")
        elif userid in self.userids['student'] and password ==
self.userids['student'][userid]['pwd']:
            self.login_status = True
            self.permission = "student"
            return self.menu(f"登录成功! 欢迎{self.userids['student'][userid]
['name']} 使用系统! ")
        else:
            attempts -= 1
            if attempts > 0:
                print(f"登录失败, 您还有 {attempts} 次机会。")
            else:
                return self.register("login")

def guess(self,*args,**kwargs):
    str1 = ""
    for name, score in self.Guess.items():
        for k,v in score.items():
            str1 += f"{name}的{k}成绩为: {v}\t"
        str1 += "\n"
    return str1

def register(self,*args,**kwargs):
    if args:
        print("账号或密码错误! ")
        userid = input("请输入账号: ")
        if userid in self.userids["admin"] or userid in self.userids["student"]:
            return "该账号已存在! "
        password = input("请输入密码: ")
        # 输入身份验证码, 判断是否有权限注册老师账号
        check_code = input("请输入身份验证码: ")
        if check_code == self.admin_code and userid not in self.userids["admin"]:
            self.userids["admin"][userid] = {"name":input("请输入姓
名: "), "pwd":password}
            self.login_status = True
            self.permission = "admin"
            return f"注册成功, 已自动登录! 欢迎{self.userids['admin'][userid]['name']}使
用系统! "
        elif check_code == self.student_code and userid not in self.userids["student"]:
            self.userids["student"][userid] = {"name":input("请输入姓
名: "), "pwd":password}
            self.login_status = True
            self.permission = "student"
            return f"注册成功, 已自动登录! 欢迎{self.userids['student'][userid]['name']}
使用系统! "
        else:
            return "身份验证码错误! "

```

```

def average(self, *args, **kwargs):
    subject_scores = {}
    for name, score in self.Guess.items():
        for subject, score_value in score.items():
            if subject not in subject_scores:
                subject_scores[subject] = []
            subject_scores[subject].append(score_value)

    average_scores = {}
    for subject, scores in subject_scores.items():
        average_scores[subject] = sum(scores) / len(scores)

    result = ""
    for subject, average_score in average_scores.items():
        result += f"{subject} 平均分: {average_score}, "
    return result.strip(", ")

def lst_ranking(self, *args, **kwargs):
    # 学生成绩综合排名
    lst = sorted(self.Guess.items(), key=lambda x: sum(x[1].values()),
reverse=True)
    # 打印排名以及各科成绩
    str1 = ""
    for k, v in lst:
        str1 += f"{k}的排名为: {lst.index((k, v))+1}\n"
        for name, score in v.items():
            str1 += f"{name}成绩为: {score}\t"
        str1 += "\n"
    return str1

def update_guess(self, *args, **kwargs):
    name = input("请输入学生姓名: ")
    guess_object = input("请输入科目: ")
    self.Guess[name][guess_object] = int(input("请输入成绩: "))
    return f"{name}的{guess_object}成绩已更新为{self.Guess[name][guess_object]}"

def menu(self, *args, **kwargs):
    # 如果是调用输出返回值
    if args:
        print(args[0])
    # 判断登录状态显示菜单
    if self.login_status:
        i = 1
        for k in self.permission_dict[self.permission]:
            print(f"{i}.{k}", end="\n")
            i += 1
        choice = input("请输入选项: ")
        return self.menu_choice(int(choice) - 1)
    else:
        # 未登录的情况，返回注册或者登录菜单的选择
        return self.menu_choice(int(input("1.注册\n2.登录\n3.退出\n请输入选项: ")) -

1)
def menu_choice(self, *args, **kwargs):
    re = ""

```

```

# 登录状态, 未登录 选项执行
if not self.login_status:
    if args[0] == 0:
        re = self.register()
    elif args[0] == 1:
        re = self.login()
    elif args[0] == 2:
        exit()
    else:
        print(self.menu("输入错误, 请重新输入! "))
else:
    # 老师权限, 选择执行
    if self.permission == "admin":
        if args[0] == 0:
            re = self.guess()
        elif args[0] == 1:
            re = self.update_guess()
        elif args[0] == 2:
            re = self.lst_ranking()
        elif args[0] == 3:
            re = self.update_guess()
        elif args[0] == 4:
            re = self.average()
        elif args[0] == 5:
            re = ()
        else:
            re = self.menu("输入错误, 请重新输入! ")
    # 学生权限, 选择执行
    elif self.permission == "student":
        if args[0] == 0:
            re = self.guess()
        elif args[0] == 1:
            re = self.lst_ranking()
        elif args[0] == 2:
            exit()
        else:
            re = self.menu("输入错误, 请重新输入! ")
    self.menu(re)

std = StudentScoreManagement()

```