| API Name | Year of Release | Features (Project Context) | Paid/Unpaid |
|---|---|---|---|
| SendGrid API | 2019 | Email service for sending automated notifications for room allotments, complaints, or food surplus updates. | Free |
| Casbin API | 2017 | Role-based access control; ensures only authorized roles perform specific tasks. | Free |
| Firebase Authentication | 2016 | Manages login and registration with auto-generated student credentials. | Free(Limited) |
| JWT JSON Web Token | 2015 | Secure authentication for all user roles (Chief Warden, Warden, Student, Staff, NGO). | Free |
| Chart.js API | 2014 | Generates reports and visual charts for occupancy, complaints, and food surplus analytics. | Free |
| Node Cron API | 2014 | Automates daily tasks (auto-remove expired food posts, daily report generation). | Free |
| Multer API | 2014 | Handles image uploads (complaints and food surplus) from users to the server. | Free |
| Firebase Cloud Messaging | 2014 | Real-time push notifications to students, staff, or NGOs when food is posted or complaints resolved. | Free |
| Bcrypt API | 2013 | Hashes and secures all auto-generated passwords before storing in the database. | Free |
| Cloudinary API | 2011 | Cloud storage for photos (complaint before/after images, mess surplus food pictures). | Free up to 25GB |
| Moment.js API | 2011 | Handles date and time operations (complaint timestamp, food expiry tracking). | Free |
| NodeMailer API | 2010 | Free Node.js module for sending internal email notifications (e.g., password resets, complaints). | Free |